Facilitating collaborative learning in accounting students: a cross-institutional study of perceptions and experiences of group work in university accounting education

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This thesis abides by the *University of Tasmania's Human Research Ethics Committee (HREC)* requirements for the conduct of research. The study was approved by the Social Sciences Human Research Ethics Committee *[HREC reference number H11127]*.

Bernadette Smith
30 June, 2017

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Dedication

For my grandchildren…

With joyous anticipation of your imminent arrival
and the world of wonder and learning that awaits.

Believe you can and you're halfway there
– Theodore Roosevelt

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Abstract

Group work has taken on greater significance in accounting education in recent times. There appear to be three main drivers: employer and professional demand, specifically the increasing emphasis on generic skills such as teamwork, interpersonal, and communication skills; the changing face of higher education, with greater diversity and numbers of students, and a renewed emphasis on learning outcomes; and the literature that documents the benefits of collaborative learning for developing skills and improving student outcomes.

However, there are different conceptualisations of what group work means and how related skill development can be integrated into the curriculum. Despite the many resources available, barriers continue to exist, preventing the effective development of teamwork skills, particularly within the confines of group work activities in accounting.

The overall purpose of this study therefore is to examine the meaning of group work for accounting students and academics and to analyse the underlying epistemological assumptions driving these results. It also aims to address the lack of cross-institutional research in accounting education by interviewing academics from six different Australian universities and selecting a sample of students from three geographically and typologically diverse institutions. Using a theoretical framework based on Social Interdependence Theory (Johnson & Johnson, 1989a; 2009), and a mixed methods research (MMR) approach, which combines exploratory, archival, survey, and phenomenographic case study methodology, this study provides an in-depth investigation of the specific variations in students' understanding of group work, learning processes in group situations, and examines the experiences and perceptions of their accounting teachers at university.

For academics the key findings are categorised into four domains, indicating positive and negative aspects of group work identified for both students and staff. For students, the quantitative results uncover an underlying latent structure of five key factors, which are subsequently supported by six qualitatively different ways that students experience group work. The qualitative categories of description are further grouped into two key domains: closed individualistic approaches to group work, and open approaches which embrace an interdependence perspective. Findings suggest however that in all variations there exists an overarching affective concept of connectedness and the need for respect. Above all, values and attitudes are considered key to facilitating collaborative learning in accounting. The implications of these findings are far reaching for all stakeholders and highlight the growing need to embrace psychological health and the emotional aspects of working together.

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Chapter 1: Introduction

1.0 Introduction

Communication and interpersonal skills – working and connecting with others tend to dominate generic skills requirements and frameworks across sectors and around the world. In higher education this has meant a greater emphasis on graduate employability, generic 'soft skills' (Barrie, Hughes & Smith, 2009), and a renewed focus on learning outcomes (Bowman, 2010), and the social nature of learning (Baker, Jarvela & Andriessen, 2013). Notably, as part of the Australian Government's Tertiary Education Quality and Standards Agency (TEQSA) standards framework, including the new Higher Education Standards Framework (TEQSA, 2016), and the revised national policy for all Australian education and training qualifications (AQF, 2013), people skills, communication and teamwork have been identified as crucial learning outcomes for all graduates. For accounting graduates, specifically, teamwork is integral to this suite of competencies (Jones, 2010), mandated for all university accounting graduates in Australia, under the auspices of both the TEQSA Act 2011 and the professional accounting accreditation guidelines for higher education programs (CPA & CAANZ, 2015). Concurrently, accounting employers are demanding 'teamwork ready' graduates who are able to think critically, communicate their ideas effectively, empathetically relate and respond to clients, and who can work productively with colleagues in an ever-changing and dynamic workplace (Hancock, Freeman & Associates, 2010; O'Connell et al., 2015; Paguio & Jackling, 2016; Tempone et al., 2012).

In this environment, group work has taken on greater significance. It is seen as a mechanism by which teamwork skills [1] can be embedded within the accounting curriculum, thereby addressing the demands of the profession, employers, and government regulatory authorities (Vu, Rigby & Mather, 2011). In the changing face of higher education, with greater diversity and numbers of students, it is also a tool often used to manage assessment in large classes (Michaelsen & Sweet, 2011). Additionally group work is central to the cooperative and collaborative learning literatures which espouse the benefits of students working together (Jaques & Salmon, 2007; Johnson &

[1] Although group work and teamwork skills are terms that are commonly used interchangeably, for the purpose of this study, teamwork is taken to mean the process of working together in a coordinated effort. Group work provides the tool/vehicle in which the interaction occurs.

Johnson, 2013). Nevertheless, despite its potential, group work is inevitably met with groans of discontent; and with much of the group work literature in accounting focusing on the end product of a group assessment task, or an isolated component instigated by an innovative academic in a single unit at one institution (Apostolou, Dorminey, Hassell & Rebele, 2015), the group processes that have the greatest influence on students tend to be overlooked (Jaques & Salmon, 2007; Riebe, Girardi & Whitsed, 2017). Consequently, there is a paucity of accounting discipline research on group work processes generally, and what the development of teamwork skills means to stakeholders within the accounting discipline. Riebe et al. (2017) report that this limited attention to teamwork pedagogy extends across all business disciplines in Australia. More broadly, research in the generic skills arena has shown that different conceptualisations exist about what it all means in the context of teaching and learning and how such skill development can be integrated into the curriculum (Barrie, 2007; 2012). It is likely that similar divergent opinions also exist within accounting.

The purpose of this study therefore, is three-fold: firstly, it aims to explore and analyse the experiences, perceptions and attitudes of students and academics towards group work in accounting; secondly, to identify the underlying epistemological assumptions and conceptions that are driving these results; and thirdly, to address the lack of cross-institutional research in this area. It is anticipated that from a phenomenographic perspective, and using quantitative surveys and in-depth interviews, models can be devised that will help identify how to improve general approaches to group work practices and the associated desired learning outcomes in accounting. For accounting educators, the aim is to investigate how they can develop an improved understanding of the factors underpinning successful group work activities in accounting. Ultimately the aim is to better enable accounting students to develop the necessary skills to enhance their group work experiences, their ability to communicate and relate with others, and for them to not only be able to contribute productively to team-based outcomes during their university days, but more importantly to build strong and effective people skills to help prepare them for a future professional career. Notably, although many excellent teaching and learning resources already exist in this area, it is clear that there are missing links that are preventing the effective facilitation of collaborative learning and the development of teamwork skills in accounting.

The remainder of this chapter introduces the overall structure used in the execution of this research. The first section provides the background for the study, drawing particularly on the professional and educational context to highlight the motivation and significance of this research for accounting education, which is outlined in section 1.2. Section 1.3 identifies the research problem and the subsequent research questions that are established. An overview of the methodology employed in this study is provided in section 1.4, followed by definitions and an outline of the overall thesis.

1.1 Background and significance

The capacity to work with others and in teams is not new to the generic skills mantra in tertiary education. It was listed as one of the key competencies in the Mayer Committee Report on post-compulsory education and training (Mayer, 1992), which is widely considered as the catalyst for Australian government policy shifts to an employability focus (ACER, 2001; DEEWR, 2012). In the same year, the 1992 Higher Education Council (HEC) report titled *Achieving Quality*, catapulted the higher education sector into the market-driven world of employment-oriented generic skills (Clanchy & Ballard, 1995), although the trend toward vocationalism already had a strong hold on the university sector (Boyce, 2004). Clanchy and Ballard (1995) criticised these early reports for being vague and inconsistent, pointing out that many inherent and flawed assumptions were being made about conceptual understandings, what constituted graduate attributes, skills and values, and the assumed links being made between university teaching and learning and the development of this new suite of generic skills.

Since then, despite the 'complexity of multiple perspectives' and few institutions providing 'convincing evidence that the stated 'graduate attributes'[2] have actually been achieved' (Barrie et al., 2009, p. 3), the commonly espoused rhetoric is that upon successful completion of their studies, graduates should be able 'to work and learn collaboratively' (Oliver, 2011, p. 4).

Teamwork, interpersonal skills and communication, have also consistently ranked highly in the skill sets most sought by employers (ACER, 2001; Barrie et al., 2009; De

[2] The term 'graduate attributes' was adopted by the university sector to differentiate the higher status and expectations of university graduates. The terms 'employability skills' and 'competencies' or 'key competencies' were initially the domain of the school and VET sector (ACER, 2001). However, in recent years the focus on professional competencies, particularly professional accounting competencies (as espoused by IAESB (2015)), has become a norm in university programs.

La Harpe, Radloff & Wyber, 2000; DEEWR, 2012; Neilsen, 2000), and in particular by employers of accounting graduates (Bui & Porter, 2010; Hancock et al., 2009a; Jackling & De Lange, 2009; O'Connell et al., 2015; Paguio & Jackling, 2016; Tempone et al., 2012). Recently, O'Connell et al. (2015) found that the professional skills required of accounting graduates could be summarised into two key categories: the skill to apply knowledge (critical thinking and problem solving); and the skill to 'interact and work effectively with colleagues and clients' (p. 52), with the latter described as having greater importance, according to the interviewees (employers, regulators, and academics).

1.1.1 The requirement for 'people skills' in higher education

In 2011, the Australian government introduced a new quality assurance and regulatory framework. The Tertiary Education Quality and Standards Agency (TESQA) was established and with it a mandate to oversee 'a more student-centred and accountable Higher Education system' (TEQSA, 2012, p. 11). The focus of this regulatory body was performance against a single set of national standards.

On 7 October 2015 legislative changes were made to the TEQSA Act 2011 to provide for the new *Higher Education Standards Framework (Threshold Standards) 2015.* The new legislative requirements, which took effect from 1 January, 2017, mean that all higher education providers now have an even greater obligation to work towards more inclusive participation, diversity and quality learning in our universities and other tertiary institutions. Furthermore, section 1.4 (2) specifies that student learning outcomes must encompass not only discipline knowledge and skills, but also generic skills, and the knowledge and skills required for employment and further study (HESF, 2015). Although learning outcomes and generic skills have been a fixture in the higher education sector for a number of years, albeit under different labels, such as 'graduate attributes' (Barrie et al., 2009; Sin, Reid & Dahlgren, 2011), teaching and learning standards had previously been unregulated, highlighting the importance and timeliness of this current research.

The Higher Education Standards also reference the Australian Qualifications Framework (AQF), and place the onus on the accredited provider to ensure learning outcomes are consistent with the prescribed level of qualification (TEQSA, 2016). Specifically relevant to this research is the prescription within the AQF that all graduates must demonstrate measureable generic learning outcomes in the area of 'people skills' (i.e. working with others and communication skills), as well as fundamental skills; thinking skills; and personal skills (AQF, 2013). The degree level exemplars provided in

the AQF are shown in Appendix 1a. Bowman (2010) explains that the AQF approach to embedding generic skills into the stated learning outcome dimensions means that 'only those generic skills pertinent to distinguishing between levels in the AQF are specified' (p. 4), and clearly these are only a subset of a much broader generic skills inventory offered by disciplines at university. However, this implies an even greater responsibility for the assessment and appropriate measurement of people skills and teamwork, as one of the four broad generic skills areas explicitly identified for development at each qualification level (AQF, 2013). It also highlights an important need for research into how group work is being used and/or might be better utilised to achieve and assess these skills.

1.1.2 Threshold standards for accounting

An important element of the government's reform agenda to introduce a standards framework, was to engage members of the academy, and other stakeholders, in a series of national consultative projects. The aim was to develop appropriate threshold learning and teaching standards in each of eight broad discipline areas (Hancock et al., 2010). Accounting played a lead role in that process, due mainly to the well-established standards structure of the professionally accredited programs, and the strong links to industry and career paths. In line with the International Accounting Education Standards Board (IAESB), the professional accounting bodies' accreditation guidelines for Australian accounting degrees state that non-technical skills are essential for all accounting graduates (CPA & CAANZ, 2015; IAESB, 2015b) [3].

The Australian Business Deans' Council (ABDC), charged with heading the learning and teaching standards initiative, nominated accounting to be the demonstration discipline for the business, management and economics subgroup (Freeman & Hancock, 2011). The outcome was the Learning and Teaching Academic Standards Statement for Accounting (Hancock et al., 2010), which identified five key threshold learning outcomes in the areas of: judgement, knowledge, application skills, communication and teamwork, and self-management. These were subsequently incorporated into the professional

[3] See Appendix 1b for a detailed list of the professional skills and competency areas currently required by the professional bodies. Appendix 1b also sets out the amendments that have been made to the Accounting professional bodies' accreditation guidelines for accounting programs in Australia over the timeline of this research project (2009-2015).

bodies' accreditation guidelines (CPA & ICAA, 2012). However, there are three significant consequences relevant to this current research project:

1. The standards do not prescribe 'learning and teaching activities to develop the learning outcomes' (Freeman & Hancock, 2011, p. 270);

2. The standards do not prescribe how learning outcomes should be assessed (Freeman & Hancock, 2011); and

3. Revisions to the standards have identified teamwork as a necessary and separate learning outcome in its own right (Hancock, Freeman, Watty, Birt & Tyler, 2016).

Following an extensive implementation and review process, facilitated by the Achievement Matters project[4], the revised learning outcomes have separated teamwork from the communication learning standard. It was found that it was too 'difficult to evidence and assess both learning standards when combined into one learning standard' (Hancock et al., 2016, p. 16). The new threshold learning outcome for teamwork at the degree level is:

> Contribute accounting expertise to a diverse team, collaboratively providing possible solutions to a routine business problem in a straightforward context (Hancock et al., 2016, p. 13).

The accompanying commentary explains that:

> The Bachelor graduate needs to be able to work with a team that may have members that come from varying disciplines or cultural backgrounds. A good team member is usually a good listener and considers other views, before determining a final outcome (Hancock et al., 2016, p. 13).

Notably these learning outcomes are the minimum requirements for a pass degree. Students operating at credit or distinction levels might be expected to demonstrate higher levels of teamwork skills, for example to show leadership in more complex contexts. In

[4] *Achievement Matters* was instigated by ABDC as a follow on project, based on external peer review, to establish consensus and enhance the quality and credibility of the national learning standards in accounting (Watty et al., 2014).

this new era focused on learning outcomes, it is now more important than ever to investigate how group work is used in accounting programs and how perceptions and experiences of accounting academics and their students might impact on the new regime.

Furthermore, it is yet to be established whether the teamwork learning outcome and the identified challenges and limitations to assessing teamwork skills in accounting will be improved by its separation from communication. However, a review of the literature in the following chapter will highlight numerous areas of need in relation to the conceptualisation, perceptions, and expectations of roles and responsibilities, as well as previous inconsistencies in findings about group work and the achievement of teamwork learning outcomes in accounting. The creation of these new national standards regarding teamwork skills provides currency for this thesis, especially in light of ongoing issues in relation to the group work experiences of accounting students and their teachers.

1.1.3 Global citizenship in a changing world

The growing educational emphasis on ethical, social and global perspectives, the internationalisation of higher education, on life-long learning, and adapting to changing environments, is also grounded firmly in the ability to communicate, respect, respond, and interact with others. In a dynamic global economy accounting professionals need the ability to think critically, to interact, communicate and to engage with each other and the complexities of the ever changing business environment in which they operate (O'Connell et al., 2015). These attributes can also be viewed in terms of promoting good citizenship, employability and economic productivity (Bowden, Hart, King, Trigwell & Watts, 2000; Bridgstock, 2009). Furthermore, history records that sustained development can only occur with cooperation and collaboration to bring about effective change (Johnson & Johnson, 2003). It is vital therefore that accounting students have the opportunity to develop interpersonal and teamwork skills so that as graduates they are fully prepared *to become* the professionals they need to be (AECC, 1990; Wilson, 2011).

More broadly, the long-standing professional status enjoyed by accounting also implies responsibilities to the social and economic well-being of our global communities (past and present). Early academic writers specified that ‘the primary aim of every institution offering accounting instruction should be to serve society to the utmost’ (Tupy, 1927, p. 54), a view reiterated by the American Pathways Commission in 2012 (AAA/AICPA, 2012), the International Federation of Accountants (IFAC) (IAESB, 2015b), and a recognised obligation for universities across all disciplines (Bunney,

Sharplin & Howitt, 2015; McArthur, 2011). Clearly, all aspects of working with others to achieve common goals represent core learning outcomes for the 21st century university student, and indeed accounting graduates entering a global market.

1.2 Motivation and research questions

The significance of this research to the profession, to accounting education, and to higher education and university graduates generally, is compelling. It follows therefore that the motivation for the study is informed by the lack of empirical evidence regarding the use of group work strategies and teamwork skills learning outcomes within the context of accounting courses at university, and the need for the accounting academy to address past deficiencies relating to group work, to meet present regulatory obligations to develop teamwork skills in their students, and to produce quality graduates who are adequately prepared to meet the expectations of employers and the challenges they will encounter as professionals.

Facilitating the development and assessment of generic skills outcomes however is problematic. While there is general agreement that they are best contextualised and embedded in disciplines (Bowman, 2010; DEEWR, 2012; Jones, 2009; 2010; OECD, 2007; Oliver, 2011; Vu et al., 2011), in Australian business faculties, specifically, there is no consensus on whose role or responsibility it is for teaching these skills (Freeman et al., 2008; Howieson et al., 2014; Jones, 2014), nor the most effective mode of delivery, or method of assessment (Vu et al., 2011). In accounting, the extent to which group work is used and the ways in which it is used are also not clear. The initial research question for this exploratory study is therefore:

> *Research Question 1:*
> To what extent and in what ways is group work used in Australian university accounting schools?

Given the exploratory nature of this study, Research Question 1 will also help to determine the sample for the remainder of the study. It aims to address the lack of cross-institutional research in accounting education (Apostolou et al., 2015) by examining accounting unit outlines from a broad cross-section of Australian institutions. In addition, Research Question 1 provides the springboard from which subsequent research questions emanate, and highlights the focus on two important stakeholder groups, accounting academics and accounting students.

Developing curricula and teaching strategies to enhance accounting students' abilities and capacity to develop skills in these areas is challenging (Cappelletto, 2010; Guthrie, Evans & Burritt, 2014; Vu et al., 2011; Watty et al., 2014). As one of the largest disciplines within Australian universities (Cecez-Kecmanovic, Juchau, Kay & Wright, 2002; Guthrie et al., 2014), increasing numbers and the need to facilitate additional challenges posed by a rapidly changing global economy, regulatory changes, internationalisation, competition, technological advances, student diversity, and the corresponding resource issues, have adversely impacted the capability of accounting educators to implement innovative and effective pedagogies in the generic skills space (Cappelletto, 2010; Guthrie et al., 2014; Pop-Vasileva, Baird & Blair, 2014). Notwithstanding the numerous teaching innovations and successful implementation of group work activites reported in accounting education journals (Apostolou et al., 2015), many accounting academics lack training in pedagogy (Evans, 2010; Wilson, Ravenscroft, Rebele & St. Pierre, 2008) and/or originate from a bygone era when the profession and the institution were very different (Biggs, 2003). Traditionally, accounting has been based on technical proficiencies and no doubt educators themselves would have been taught that way throughout their own undergraduate, postgraduate and/or professional studies. Since it is firmly established that different conceptualisations of teamwork, and generic skills, present the key research problem for this study, it follows that the perceptions of accounting academics are of paramount importance. Although notably, there is limited evidence that explicitly examines accounting academics' views in this area. Bui and Porter (2010) and Oliver, Whelan, Hunt and Hammer (2011) report contrary indicators of academics' perceptions of the importance of teamwork skills, therefore this study's in-depth analysis of the group work phenomenon and the conceptualisation of teamwork skills from the academics' perspective, will contribute significantly to the collective knowledge about this important stakeholder group.

Vilkinas (2009, p. xi) supports such a research initiative, particularly given the reliance that universities place on their unit coordinators to 'provide leadership at the degree/program level' and the critical role these academics play in the learning outcomes of growing numbers of students. Likewise, Riebe, Girardi and Whitsed (2016) call for further research into the conditions affecting teamwork pedagogy, particularly the influences on educators, which is an area that is largely unexplored in higher education generally, and in business disciplines in Australia specifically (Riebe et al., 2017). To

better understand the underlying issues for academics, the second research question to be addressed in this study is:

Research Question 2:
How do accounting academics perceive group work within the accounting curriculum?

Despite the continued emphasis on generic skills, evidence suggests that accounting education continues to fall short on achieving learning outcomes in these areas of 'soft skills' (Bui & Porter, 2010; Cecez-Kecmanovic et al., 2002; Jones, 2017; Kavanagh & Drennan, 2008). Employers have reiterated the importance of these skill sets but continue to be critical of the level of actual achievement attained by our accounting graduates (O'Connell et al., 2015; Paguio & Jackling, 2016; Tempone et al., 2012). The message has clearly reached the students too. Kavanagh and Drennan (2008) found that accounting students identified life-long learning as most important to their future careers, citing the ability to communicate, the ability to think critically and the development of interpersonal skills, such as team work skills, as being necessary to achieving professional outcomes. Consistent with subsequent studies (Abayadeera & Watty, 2016; Jackling & De Lange, 2009), students' perceived however, that the only 'skills' currently being taught at university are technical and research skills. Such a perception is feasible given that research projects and case studies are the dominant pedagogical strategies used by accounting educators to embed generic skills (including teamwork) into the curriculum (Apostolou et al., 2015; Apostolou, Dorminey, Hassell & Watson, 2013). Despite this, it appears that the link between these approaches and desired learning outcomes regarding generic skills is still misunderstood (Abhayawansa, Bowden & Pillay, 2017). Furthermore, as noted by Wells, Gerbic, Kranenburg and Bygrave (2009), it is not always clear whether students' concerns about teamwork relate to assessment, learning outcomes, or a lack of teamwork activities within their accounting courses. To address the problem of conception it is important to ask students what group work means to them, without leading them on the issue of teamwork skills or group assessment. Therefore, the third research question to be investigated is:

Research Question 3:
What does group work mean for accounting students at university?

Paguio and Jackling (2016, p. 11) agree that ‘conceptual vagueness has restricted our understanding of teamwork, thus limiting the capacity to develop this skill in the curriculum’. Furthermore, Wilson et al. (2008) suggest that to improve the learning outcomes of accounting graduates and in turn future accounting professionals, we need to not only employ effective educational approaches, but also develop the expertise of accounting educators, and understand the epistemological assumptions implicit in their teaching practices. Prior research has identified the importance of presage characteristics, process, and other environmental factors in influencing the teaching and learning situation in higher education (Biggs, 2003; Entwistle & Peterson, 2004; Prosser & Trigwell, 1999; Ramsden, 2003), so it follows that where the accounting discipline has been subjected to ongoing change in the profession, industry, and academe, with increasing numbers of students, greater diversity, internationalisation, and scarce resources, there will likely be a flow on effect from these factors (Cappelletto, 2010; Guthrie et al., 2014; O'Connell et al., 2015). Following on from Research Questions 2 and 3 therefore, it is important to understand what factors appear to be impacting the way in which group work and group learning processes are being experienced, conceptualised and perceived by accounting students and their teachers. Therefore, the fourth research question posed is:

Research Question 4:
What are the factors that contribute to student and staff conceptions of group work in accounting?

Finally, Summers and Volet (2010, p. 489) point out that ‘despite the ubiquity of group work at university, students are generally not taught what learning collaboratively looks like in practice, how to engage in it or that it is likely to enhance their learning’. In the same way, students are often not aware that the ability to work in a group is a skill in itself or that the attainment of this skill is a required attribute for most graduates, but particularly for accounting graduates (Hancock et al., 2016). Furthermore, it has been argued that group work is not tantamount to collaborative learning (Summers & Volet, 2010), the distinction being that groups who simply divide up a task amongst individuals and then ‘stick’ the component parts back together, just in time to submit, are not learning collaboratively (Summers & Volet, 2010). Summers and Volet (2010, p. 474) point out that ‘a basic pre-requisite for collaborative learning is that students engage with the substance of the learning task (i.e. the content to be understood or the problem to be

solved) together', therefore simple task management might not meet the criteria of collaborative learning.

This theoretical aspect of group work underpins the last research question for this study. Providing a theoretical perspective for this study also assists in addressing previously identified gaps in the accounting education literature, which is generally criticised for being too descriptive in nature, and ignoring the rich theoretical insights available in other domains (Apostolou et al., 2015).

Informed by a constructivist epistemology, Chapter 3 will examine relevant social learning theories in detail. In summary, the central theme, uncovered from an interrogation of the key theoretical perspectives on group learning in that chapter, is interdependence. Interdependence means that individuals within a group share a relationship where 'events that affect one of them affects all of them' (Johnson & Johnson, 2013, p. 6). Social Interdependence Theory (SIT) is identified as an appropriate conceptual foundation for creating effective learning groups at university (Johnson & Johnson, 1989a; 2005a). It suggests that social interactions are based on either positive interdependence (a cooperative approach), negative interdependence (a competitive approach), or no interdependence at all (an individualistic approach). Utilising this theoretical base the fifth research question to be examined is:

Research Question 5:
How is the theoretical concept of interdependence manifested in group work within accounting education in universities?

The literature in all of the abovementioned areas will be explored more fully in Chapters 2 and 3, however the research questions informed by the literature review are presented here to provide the reader with a clear conduit through the labyrinth of research contexts that exists in this area of interest.

1.3 Methodology

A mixed methods research (MMR) approach, which utilises a two-stage design and combines exploratory, archival, survey, and phenomenographic case study methodology, provides an in-depth investigation of the research questions posed. This sequential MMR design supports a better understanding of the issues, and allows the sequence to be determined by the research questions and the overall purpose of the study (Ivankova, Creswell & Stick, 2006; Plano-Clark & Badiee, 2010). Furthermore, since accounting

education researchers have previously tended to rely heavily on descriptive accounts, experimental designs and surveys of individual classes, single institutions and narrow geographical settings (Apostolou et al., 2015), Paisey and Paisey (2004) suggest that there is opportunity and scope in accounting education research to embrace a wider range of research methods and undertake a broader sample perspective.

Stage one in the study involves the collection and analysis of preliminary data contained in 90 accounting unit outlines from eight universities. It subsequently gathers and reports on the quantitative and qualitative data collected from survey interviews with 16 coordinators[5] who accepted the invitation to share their perceptions and experiences of group work. Using a nested sample design, a total of five groups of participants were selected from the 16 academic interviews. Group two were a sub-sample of three unit coordinators who were chosen to participate further as the case study participants. The case study sites were selected using a maximum variation strategy, and therefore differed in terms of the type of group work used, the subject taught, class size and staffing, the type of institution, and geographical location. The remaining participant groups included seven other staff members teaching into the case study units, a total of 249 students surveyed, and a sub-sample of 29 students who volunteered for the in-depth phenomenographic interviews conducted in stage two of the study.

Onwuegbuzie and Leech (2007b, p. 244) explain that 'nested sample designs are most commonly used to select key informants', and are appropriately coupled with maximum variation selection criteria and multi-case or cross-case analyses. The multi-level approach used in this study draws on the experiences of different populations within the sample/ subsample. Hierarchical levels are commonly exposed in this type of design and are often used to compare teacher/student perceptions of a phenomenon. In addition, because of the hierarchical nature of multi-level relationships, sampling strategies and sample size for participants at different levels do not need to be consistent (Collins, 2010; Onwuegbuzie & Leech, 2007b). This type of mixed method sampling design, which utilises case studies, multi-level and multi-stage strategies, in contexts where different units are 'nested' within one another, is justified given its routine use in educational research (Teddlie & Yu, 2007; Yin, 2006).

[5] The unit coordinators interviewed were from six different universities. Six of the original eight institutions kindly granted permission for their staff and students to take part in the study, beyond granting access to the unit and course outlines.

1.4 Definition of group work

Few contemporary writers in higher education attempt to categorically define what they mean by 'group work'. This is likely because over the past two decades the term has gained common usage status in universities and describes a variety of pedagogical strategies, techniques, tools, and/or methods of group learning (Dyball, Reid, Ross & Schoch, 2010; Jaques & Salmon, 2007; Lejk, Wyvill & Farrow, 1997). Riebe et al. (2017) correctly point out however, that 'not all groups are teams' (p. 135), which is an important distinction that arguably highlights the problematic nature of group work at university. Simply using a group work structure does not necessarily facilitate teamwork or group learning (Summers & Volet, 2010). A further complexity is that in reviews of the literature, the original author/s' use of the respective terms is often retained to preserve the integrity of the work (Riebe et al., 2017).

Nevertheless, for the purposes of the current study it is important to establish parameters, beginning with a working definition of group work.

Following a review of the literature, group work is therefore defined as:

> *any directed interaction or sharing of information, responsibilities and/or tasks between students within the context of a unit/subject.*

Students will often gather with their peers and voluntarily organise themselves into study groups, however these types of groups will not be considered here, due to research design restrictions, which will be outlined later in Chapter 4, and given the criterion in the working definition for the interaction to be 'directed'. Furthermore, although teamwork and group work are often used interchangeably, for the purpose of this study, teamwork is taken to mean the *process* of working together in a coordinated effort. Teamwork encompasses the skills and processes, while the group and directed group work tasks provide the means or the mechanism to facilitate interaction. To use a computer analogy, group work is the hardware or the casing, and teamwork is the software or processing component.

1.5 Overall structure of the thesis

This thesis is presented in 11 chapters, with supporting documentation provided in 14 appendices. The overall structure is as follows:

- *Chapter 1* introduces the study and highlights the importance of this research not only for accounting education, but for the profession, industry and higher education generally. It emphasises the significance of past and present government and professional reform agendas in the background to the study, and sets out the research questions that guide the methodology employed. The definition of group work used in this study is also presented here.
- *Chapter 2* focuses on the accounting education context of the study and reviews the literature on group learning specifically relating to accounting education.
- *Chapter 3* examines the key theoretical perspectives relating to group learning in universities. A consistent criticism of accounting education research is that it generally dismisses the need for a robust theoretical framework (Apostolou et al., 2015). Chapter 2 discovers that the accounting education literature on group work is similarly descriptive in nature. Therefore, further motivated by the gap in this literature, a conceptual framework is developed in Chapter 3.
- *Chapters 4 and 5* in combination explain the complex array of research methodologies employed in this mixed methods study. Importantly, Chapter 5 also provides a comprehensive account of the three stage pilot study conducted on the student survey. This was significant to the successful administration of the survey in this study but in addition, addresses an identified gap in the literature where the processes and outcomes of pilot studies are rarely reported in any detail.
- *Four chapters (6, 7, 8 and 9)* are dedicated to the analysis and results of the investigations undertaken. Chapters 6 and 7 (respectively) relate to the quantitative and qualitative analysis of the data collected from academics. Chapters 8 and 9 (respectively) present the findings of the student surveys and interviews. A feature of Chapter 9 is the phenomenographical analysis used to examine the variations in student conceptualisations and to explore the deeper meaning of group work for students. The final results uncover six qualitatively different categories of description and five themes of expanding awareness which describe students' experiences of group work in accounting education.
- *Chapter 10* features a discussion of the overall findings of the study. It applies the theoretical framework to key findings, particularly in relation to the research questions posed in this study, and concludes with a diagrammatical representation of how the combined findings and theoretical perspective integrate.

- *Chapter 11* provides the conclusion to this thesis. Following a brief overview of the background, aims and significance of the study, it highlights the key contributions and exposes important implications for stakeholders. Relevant delimitations of the study and opportunities for future research are also discussed, before summarising the chapter and thesis as a whole.

1.6 Chapter summary

This chapter has introduced the primary purpose of this study, which is to investigate the epistemological assumptions of accounting academics and students to provide better insights into and firmly establish the underlying conceptualisations and the various understandings of group work in accounting. Given the worldwide focus on establishing quality learning outcomes in relation to teamwork, communication and interpersonal generic skill sets of accounting graduates, and the use of group work to facilitate an environment of cooperation and collaboration, this study provides a significant contribution to research on a number of levels. Having outlined the research questions, methodology, and overall structure of this thesis in this chapter, the next chapter familiarises the reader with the accounting education environment and specifically with the group work literature in accounting education.

Chapter 2: Accounting education and group work

2.0 Introduction

Accounting education provides the context for this research. Therefore this chapter will focus on accounting education literature and review prior research in relation to group-work and group learning in accounting education. The rich and extensive group learning literature in other disciplines, such as educational psychology, will be explored in the following chapter. This chapter begins by highlighting the significant historical, social and professional context from which the current emphasis on teamwork, interpersonal and other 'soft' skills has grown within accounting. Criticisms of a traditional technical focus of the accounting discipline underpin this section and are discussed in relation to historical and current regulatory frameworks. Generic skills literature is introduced briefly in section 2.2, particularly in reference to the accounting discipline, since group work is widely touted as a useful tool for enhancing students' interpersonal, communication and critical thinking skills (Hancock et al., 2009b). An examination of the various group-based learning techniques and strategies utilised in accounting education follow. Notably, the perceptions of stakeholder groups (students, academics, and employers) in relation to interpersonal and group skills in accounting education provide the lens through which much of the prior literature will be explored. This chapter will conclude with a summary of the aforementioned review of accounting education and the group work literature within the discipline.

2.1 Accounting education: an overview

With the emergence of accounting professional bodies in Australia in the 1890s, the British model of requiring members to pass entry examinations to practise as a professional accountant introduced the need for more formal education (Carnegie, 2009), thereby expanding the traditional workplace training model to include two main components: education and experience (Goldberg, 1981; Littleton, 1942). Littleton's (1942) article '*The meaning of accounting education*' posited that the two elements, commonly identified as discrete components of accounting education, that is experience (by practice) and education (by study), were arguably just variations of the same thing. He argued that 'fundamentally education is experience' and 'learning is an activity directed at gaining experience', personally and vicariously (Littleton, 1942, p. 216). Furthermore, he argued that 'under suitable conditions…almost any avenue of accounting

education is capable of yielding good results': the objective is *to prepare* individuals 'to act in certain ways *with understanding*' [emphasis added] (Littleton, 1942, p. 216).

The concept of life-long learning and the attainment of generic skills is deeply embedded in Littleton's (1942) definition, and underpins the internationally accepted definition of accounting education. Internationally, accounting education is broadly defined as the learning and development undertaken to achieve competence as an accounting professional (IAESB, 2015a), and as such includes: education[6] (including general academic education and professional accounting education), practical workplace experience, and training[7], as well as informal learning opportunities provided through 'coaching, networking, mentoring, observation, reflection, and self-directed and unstructured gaining of knowledge' (IAESB, 2015a, para. 25). What this means for university accounting educators needs to be explored further, particularly in light of recent changes to the Framework for International Education Standards for Professional Accountants and Aspiring Professional Accountants and the International Education Standards (IAESB, 2015b).

The accounting education standards framework now distinguishes general education from initial professional development (IPD) and continuing professional development (CPD)[8]. A consequence of this change, which is particularly relevant to this current research project, is that *IES 3*, previously the international education standard for *IPD professional skills and general education*, no longer imposes regulatory requirements on the general education component and has removed it from IES3. The IAESB views general education as 'having a broader scope than just developing professional skills, it is also relevant in developing technical competence and professional

[6] 'Education is a structured and systematic process aimed at developing knowledge, skills, and other capabilities; a process that is typically but not exclusively conducted in academic environments' (IAESB, 2015a, para.24).

[7] 'Training describes learning and development activities that complement education and practical experience. Training emphasizes practical application, and is usually conducted in the workplace or a simulated work environment' (IAESBa, 2015, para. 24).

[8] 'General education (a) develops essential knowledge, skills, and attitudes, (b) helps prepare an individual for entry to a professional accounting program, and (c) supports lifelong learning and development' (IAESB, 2015, para. 27). 'IPD is the learning and development through which aspiring professional accountants first develop competence leading to performing a role in the accountancy profession'… It includes 'professional accounting education, practical experience, and assessment' (IAESB, 2015, paras 30-31). 'CPD is the learning and development that develops and maintains professional competence to enable professional accountants to continue to perform their roles competently' (IAESB, 2015, para. 34).

values, ethics, and attitudes' (IAESB, 2015c, p. 11), although it is also recognised that general education can extend into IPD and CPD phases.

Wilson (2011) further explains the distinction between the different stages of accounting education. He argues that in secondary school, accounting education is about 'awareness', while in university accounting education students are preparing '*to become*' accountants (AECC, 1990, p. 307). Both academic phases are based on 'learning through knowing' (Wilson, 2011, p. 4). Pre-qualifying professional training is about learning '*to be*' an accountant and together with CPD is based on 'learning through doing' (Wilson, 2011, p.5). The American Accounting Education Change Commission (1990) went further, suggesting that pre-entry accounting education must be about teaching students 'how to learn' to prepare them for a profession that is based on life-long learning. Teaching students 'how to learn' means giving them the skills and strategies to be 'active participants in the learning process, not passive recipients of information' (AECC, 1990, p. 309). Therefore 'learning by doing should be emphasized, *working in groups* should be encouraged' (emphasis added) (AECC, 1990, p. 309).

The issue with so many formal stages in accounting education, and with broad-based definitions, in time, content, concept, levels, techniques, and desired learning outcomes, is the potential confusion it causes for identifying the roles and responsibilities of each sector or institution in the supply chain (Behn et al., 2012; Jones, 2014; Wilson et al., 2009). This ambiguity potentially fuels a complacent attitude with some accounting academics, particularly in relation to the teaching and development of generic skills and teamwork.

Furthermore, the role of the university accounting program differs significantly across cultures, countries and jurisdictions (IAESB, 2015a; Watty, Sugahara, Abayadeera & Perera, 2012). Such variation presents potential differences in perceptions, expectations and attitudes across a transient and ever more global and culturally diverse academic workforce, even within the same university. For example: in Sri Lanka, students commonly enrol concurrently in a university degree and a professional program (Watty et al., 2012); in the U.K. and Japan there is no requirement to have any type of university degree for entry to professional accounting programs (McPeak, Pincus & Sundem, 2012; Watty et al., 2012); in contrast, the U.S. system focuses on universities being the key providers of accounting education. In the U.S. graduating students may pass their professional exam and be licensed to practise with little or no experience.

Interestingly, the professional bodies do not monitor the quality of U.S. university accounting programs (McPeak et al., 2012) in the same way that occurs in Australia.

To fully appreciate the problematic nature of the accounting education context, it is necessary to highlight how the characteristics of this environment might be affecting the use of group work and the attainment of teamwork skills in Australian university accounting programs.

2.1.1 The Australian context

Accounting courses are offered at every one of Australia's 39 universities[9] (Mathews, 2004; Universities Australia, 2016). However, accounting education, within the university system, and accounting academics are products of a socio-political history. In Australia, that history is well documented, particularly in relation to the legacy it bears from successive political agendas imposed by the state, the professional bodies, and in turn, tertiary institutions (Birkett, 1989; Birkett & Evans, 2005; Carnegie, 2009; Evans, Burritt & Guthrie, 2010; Guthrie et al., 2014; Mathews, Brown & Jackson, 1990). Appendix 1c displays a chronology of the key historical events that define this environmental context for accounting academics. The underpinning feature is the relentless pursuit to increase student numbers. In every era, post-war (Goldberg, 1981); Colleges of Advanced Education (CAEs), (Evans & Juchau, 2009); Dawkin reforms (Tippett, 1992), and in recent decades, globalisation and the internationalisation of higher education (Parker & Guthrie, 2010), accounting education in Australia has experienced unprecedented growth.

Notably the widespread mobilisation of students across international boundaries, and mainly to the West, is generally considered to be the most dramatic change, and greatest challenge, to the higher education sector, and accounting in particular, in recent years (Ekanayake & Jackling, 2014; Guthrie et al., 2014; Marginson, 2012; OECD, 2015).While the 'reciprocal cultural and economic benefits of an internationalised sector should not be understated' (Smith, Maguire & Han, 2016, p. 2), the rapid growth of students from mainly non-English speaking countries has presented insurmountable challenges for ill-equipped accounting academics (Cappelletto, 2010; Guthrie et al., 2014). The staff and student experience is unequivocally influenced by this situation.

[9] The full list of Australian universities, and their profiles, is available on the Universities Australia website: https://www.universitiesaustralia.edu.au/ (Universities Universities Australia, 2016).

With increasing numbers of students, a greater diversity in the student demographic, and declining government funding, the delivery of the accounting degree program in Australia has been thwarted by an endless barrage of challenges and criticisms for the entirety of its 50 year history as a recognised academic discipline (Guthrie et al., 2014; Mathews et al., 1990; Newman, 1980). What is more, the personal toll on teaching staff has been readily recognised (Cappelletto, 2010).

In a recent survey of work-related attitudes of 350 accounting academics (at all levels), from 37 Australian universities, Pop-Vasileva et al. (2014) found a disturbing trend of job dissatisfaction, particularly in relation to excessive workloads. Not surprisingly, early career academics were significantly more likely to experience low levels of satisfaction, and higher levels of stress, associated with research pressures, increasing student/staff ratios, poorer quality students, a lack of perceived organisational support, and departmental management styles. A perceived lack of communication within all institutions was also reported as a contributing factor to levels of job satisfaction (Pop-Vasileva et al., 2014). These findings support prior research (Evans et al., 2010; Samkin & Schneider, 2014; Watty, Bellamy & Morley, 2008), and although Watty et al. (2008) link declining levels of job satisfaction to a serious erosion of intrinsic and extrinsic rewards, they caution that it is not clear if 'this erosion translates into less productive, less committed, staff' (p. 150).

It is important to consider the potential impact of these environmental conditions because research has shown that such factors influence academics' approaches to teaching (Biggs & Tang, 2011; Prosser & Trigwell, 1999; Ramsden, 2003; Trigwell, 2012), and in turn how students perceive the learning environment (Trigwell, 2012). For example, Trigwell (2012, p. 608) explains that university teachers are more likely to adopt student-focused approaches when they experience 'a manageable workload, where the characteristics of the students were more uniform (similar prior academic ability, similar language levels etc.) [and] where the class size was smaller'. Furthermore, teachers' positive emotions and lower levels of frustration are associated with more student-focused approaches to teaching (Trigwell, 2012), rather than the transmission/teacher-focused approach for which accounting educators have historically been criticised.

2.1.2 Criticisms of a technically focused discipline

At the time when accounting professional bodies were becoming established (early last century), American academics recognised the shortcomings 'in a subject so practical the

utilitarian considerations have naturally out-weighed the humanitarian' (Tupy, 1927, p. 50). Nevertheless, accounting education (worldwide) emerged with a narrow technical focus on acquiring knowledge of accounting facts, concepts, principles and procedures (AECC, 1990; Boyce, 2004; Mathews, 2001b) in 'mind-numbing detail' (Zeff, 1989, p. 165) to prepare students/trainees for work in the accountancy field, a position fuelled by market demand for competent work-ready graduates (Evans, 2010).

Early attempts to improve the quality of instruction in university accounting courses is recorded by Jackson (1926) who candidly described the Harvard Business School's introduction of case studies for discussion to complement the practical problem based approach used. However, it was not until the mid-1980s that the technical focus, typical of a university-based accounting education, was heavily criticised by employers, the profession, and academics, in Australia and overseas (AECC, 1990; Ainsworth, 2001; Bedford et al., 1986; Mathews et al., 1990; Tippett, 1992; Williams, 1991). Specifically, it was argued that such a narrow technically focused definition of accounting education drove (and continues to drive) a constricted curriculum and pedagogy (Ainsworth, 2001; Albrecht & Sack, 2000; Patten & Williams, 1990).

Together with the overuse of assessment methods based on technical components (such as practice sets, multiple choice questions, tests and examinations), it was argued that students become unrealistically oriented to a mathematical approach (Mathews, 2001a), the 'memorisation' of content (Ainsworth, 2001; O'Connell, Ferguson, Jacobsen & Carr, 2010; Sundem & Williams, 1992), and the false belief that there is only one right answer (Kelly, Davey & Haigh, 1999). This traditional inward focus on procedural knowledge is inadequate, since it pays too little attention to issues of globalisation, technology, values and ethics (Albrecht & Sack, 2000; Mathews, 2001a), the changing role of the accountant (Sin et al., 2011), and the complexity of business and society in general (Kelly et al., 1999), rendering accounting education static and fundamentally flawed, because the profession, and the world around it, is constantly changing (Patton & Williams, 1990). Accounting is essentially about people, processes, politics, and promises, not just numbers (Gray, 2002; Mouritsen & Kreiner, 2016; Unerman & Chapman, 2014).

Despite concerted efforts in the accounting discipline, as well as institutional and sector-wide changes, to move from a content focus to a learning process focus (Needles Jr & Powers, 1990), a universal trend has been reinforcing the 'market ideology'

(Saravanamuthu & Tinker, 2002) progressively moving university curricula towards vocational-based training to meet the needs of business and the corporatisation of the university degree (Boyce, 2002). It appears the traditional *status quo* in accounting education is being maintained because society and the profession reward students, and their institutions for graduating 'immediately-useful-graduates' (Kelly et al., 1999, p. 323) – those who can complete a tax return or record journal entries. The paradox, however, is that employers remain critical of accounting graduates who are not 'work-ready' because they lack essential generic skills, such as communication, teamwork, and critical thinking skills (O'Connell et al., 2015; Tempone et al., 2012).

2.2 Generic skills and the underlying problem of conception

Arguably, fundamental differences in conception will impact the extent to which skills are taught and assessed, and the way in which various pedagogies, such as group work, are used. Over the past two decades, an extensive literature has developed in the generic skills arena to address concerns about skills inventories and graduate attributes, specifically in relation to the lack of shared understanding of what it all means for higher education and business stakeholders (ACCI/BCA, 2002; Awayiga, Onumah & Tsamenyi, 2010; Barrie, 2003; 2006; 2007; Barrie et al., 2009; Bolt-Lee & Foster, 2003; Clanchy & Ballard, 1995; DEEWR, 2012; Green, Hammer & Star, 2009; Kember, Leung & Ma, 2007; OECD, 2007). This literature traverses national boundaries in education, business and government sectors, and academic disciplines. In general, universal agreement has been reached on the need for non-technical skill sets; however, stakeholders at all levels continue to experience difficulties. Barrie (2006) argued that such problems will persist if research does not move beyond the simple documentation of lists. Despite a plethora of studies, the issue is that most research commonly emphasises the desirability of particular skills, or the most appropriate graduate outcomes (Barrie et al., 2009; Oliver, 2011), with a paucity of evidence on the assurance of learning outcomes for generic skills (Oliver, 2011).

In accounting education, there has been a strong focus on the expectation gap that exists between employers, graduates, students, and academics, in particular, perceptions of what constitutes the most important skills for graduates (Bui & Porter, 2010; Courtis & Zaid, 2002; Freeman & Wells, 2015; Jackling & De Lange, 2009; Jackling, De Lange & On, 2007; Kavanagh & Drennan, 2008; Tempone et al., 2012); the failure of accounting programs to meet the expectations of employers and students (Albrecht & Sack, 2000;

De Lange, Jackling & Gut, 2006; Kavanagh & Drennan, 2008; Mathews et al., 1990; Webb & Chaffer, 2016); the importance students place on particular skills (Smith et al., 2016); and how characteristics, context, and cultural factors can impact the noted divergences in opinion on expectations (Bui & Porter, 2010; Courtis & Zaid, 2002; Jackling et al., 2007; Keneley & Jackling, 2011; Tempone et al., 2012). For example, after interviewing 12 accounting employers, Paguio and Jackling (2016) found an 'overwhelming confirmation' for the importance of teamwork; however, in describing what was expected, it was also found that teamwork was a multi-faceted concept and 'viewed as a combination of competencies' (p. 11), adding to the challenges of being able to deliver and assess desired learning outcomes in this area.

Notably absent from the literature are studies of accounting academics' perceptions and experiences of group work. Indeed there is little evidence of how the general population of academics are addressing the noted challenges in delivering a generic skills based curriculum, other than the few pioneering individuals who implement group-based initiatives (Apostolou et al., 2015). This clearly presents an important gap that needs to be addressed. Where accounting academics have provided opinion on the importance of teamwork skills as part of broader generic skills studies, the results are inconsistent (de la Harpe et al., 2009). In one case, accounting academics indicated teamwork skills were an important part of a suite of generic skills (Oliver et al., 2011); in another it was suggested that teamwork skills, such leadership and interpersonal skills were the domain of senior accountants and not relevant to entry-level graduates (Bui & Porter, 2010). The conflicting and limited evidence regarding accounting academics overall perceptions of group work and teamwork skills generally, provides further motivation for this study.

Nevertheless, the learning opportunities and benefits of group work to deliver desired learning outcomes for interpersonal and teamwork skills are widely espoused and endorsed through numerous forms of group learning structures that have been studied and documented in the wider education and educational psychology fields (Baker et al., 2013; Barkley, Cross & Major, 2005; Forsyth, 2010; Jaques & Salmon, 2007; Johnson & Johnson, 2013; Michaelsen & Sweet, 2011; Slavin, 1981). Although, despite the plethora of research, and the endless supply of group work resources available on university websites, and on the internet generally, accounting academics (like others) struggle to synthesise the overwhelming volume of information, and complex nature of group work.

Ballantine and McCourt Larres (2009, p. 387) lament that 'little empirical evidence exists to help academics make an informed choice about which form of group learning enhances the development of interpersonal and communication skills' and/or accounting students' performance in attaining these skill sets (Ravenscroft, 1999).

The following section therefore provides a review of the group work literature that exists in accounting education.

2.3 Group work in accounting education

In accounting education literature, group learning research is relatively recent. Prior to the 1990s, the accounting education journals published very little about delivery modes and instructional strategies (Paisey & Paisey, 2004; Rebele, Stout & Hassell, 1991), and specifically for accounting education research, publication on group learning was sparse between 1970 and 1990 (Rebele et al., 1991; Rebele & Tiller, 1986). The tide turned in the 1990s following external pressure from accounting professional bodies, industry, and governments, for accounting education to re-invent the accounting curriculum in higher education, and include a greater focus on the development of interpersonal skills and other generic attributes, to better prepare students for entry to the 21st century workplace. Accounting academics, Riordan, Street and Roof (1997) compiled a collection of the early group learning studies in accounting and higher education generally, and noted that until then the rich body of literature on educational group work had focused entirely on primary and secondary school contexts. Since that time group work has become a regular part of the undergraduate experience, although the accounting education literature remained divided on its effectiveness (Gabbin & Wood, 2008), and research in the area continues to be piecemeal.

Reviews of the literature published in accounting education journals have been continuously provided over the past three decades (Apostolou et al., 2015; Apostolou et al., 2013; Apostolou, Hassell, Rebele & Watson, 2010; Apostolou, Watson, Hassell & Webber, 2001; Paisey & Paisey, 2004; Rebele et al., 1998a; 1998b; Rebele et al., 1991; Rebele & Tiller, 1986; Watson, Apostolou, Hassell & Webber, 2003; 2007). Conducting a meta-analysis of this work highlights clear trends and patterns across time (as shown in Table 2.1). Articles relating to group work (in some form) have accounted for an average of four percent of the publications in five designated accounting education journals. Notably many accounting authors also choose to publish their work elsewhere, but for the purpose of illustration, Table 2.1 reveals some interesting statistics regarding

Table 2.1 A meta-analysis of group work articles published in accounting education journals[a]: 1986 - 2015

Review authors	Period	Articles reviewed	GW articles	Percentage	Descriptive	Empirical	GW Focus
Rebele & Tiller (1986)	1970 - 1984	152	0	0%			
Rebele, Stout & Hassell (1991)[b]	1985 - 1991	325	1	0%	not included	1	Exam performance
Rebele et al (1998a; 1998b)	1991 - 1997	348	21	6%	12	9	CL techniques & performance
Apostolou et al (2001)	1997 - 1999	216	22	10%	19	3	Exam performance
Paisey & Paisey (2004)[c]	1992 - 2001	239	6	3%	3	3	Techniques & perceptions
Watson et al (2003)	2000 - 2002	206	12	6%	1	11	Performance /preference
Watson et al (2007)	2003 - 2005	223	7	3%	3	4	How to use group work
Apostolou et al (2010)	2006 - 2009	330	21	6.4%	4	17	Techniques & perceptions
Apostolou et al (2013)	2010 - 2012	291	13	4.5%	6	7	Compare group learning
Apostolou et al (2015)	2013 - 2014	256	1	0.4%	0	1	PG student satisfaction
	TOTAL	2586	104	4.0%			

[a] *Journal of Accounting Education, Issues in Accounting Education, Accounting Education: An International Journal, Advances in Accounting Education* (formally known as *Accounting Education: A journal of Theory, Practice and Research)* and *Global Perspectives on Accounting Education*. *The Accounting Educators' Journal* was only included in Apostolou, Watson, Hassell, & Webber (2001).

[b] Rebele, Stout & Hassell (1991) only included empirical studies (& for completeness included articles from earlier years not previously included in 1986 paper.

[c] Paisey & Paisey (2004) only included articles published in Accounting education: an international journal, which had previously been omitted from earlier reviews

accounting journals. Most notably, the 1990s decade produced the greatest number of group work articles, however these were mostly descriptive, and focused on how cooperative learning (CL) techniques could be used in the classroom to improve exam performances. Specific reviews were also published collating this early accounting education research on the implementation of CL techniques (Ravenscroft, Buckless & Hassall, 1999; Strand Norman, Rose & Lehmann, 2004). Another surge in group work publications occurred in the six year period from 2006 to 2012, although this time there was a significant swing towards empirically based research that focused mainly on garnering student survey opinions about group based techniques used in class. Interestingly, this period aligns with the en masse mobilisation of international students globally. 'During 2005-12 the number of foreign tertiary students enrolled worldwide increased by 50%' (OECD, 2015, p. 353). As well as increasing student numbers, this was also the time governments were adopting international accounting standards, the IAESB was established, and due to post-Enron and other major corporate collapses, accounting education was in the limelight. Obviously editorial policies and recommendations can also influence the type of research undertaken. For example, after reviewing the literature published in the later half of the 1990s, Apostolou et al. (2001) concluded that 'what is needed most in the accounting literature is empirical evidence about how to improve the educational setting' (p. 311). A subsequent plea for more empirical research was made in 2007 (Watson et al., 2007).

Nevertheless, it is apparent that there exists an alignment between group work interest in accounting education and external influences. Similar environmental drivers have seen the study of small groups in psychology and educational psychology burgeoning across similar timelines, and splintering into many different streams (Salas, Cooke & Rosen, 2008). Salas et al. (2008) estimate there are currently over 130 theoretical models relating to small group interactions in existence. However, in reviewing the literature, it appears that accounting educators have been restrained in their application of group work theoretical models, preferring, in the main, to focus on variations of the cooperative learning framework, or alternatively to take a more atheoretical, descriptive approach (Apostolou et al., 2013).

Fink (2004) categorised the various ways in which group work is used and reported in higher education, into three main areas: cooperative learning, team-based learning, and casual use. However, despite the different terminologies used, Fink (2004,

p. 5) explains that all authors are 'referring to the same general idea'… 'small group learning'. The distinguishing feature between each category is the level and type of structure. The remaining sections of this chapter will therefore explore further the development of the group learning literature in accounting education, from the perspective of these three key areas. It describes a trend that loosely evolves chronologically from educational psychology's early application of cooperative learning techniques in schools (Riordan et al., 1997), the variant, team-based learning, and the contemporary use of group work, which tends to be casual and/or ad hoc. It concludes with a comparison of the collaborative and cooperative learning terminology.

2.4 Cooperative learning

There are many variations of cooperative learning (CL) (Johnson & Johnson, 2013; Riordan et al., 1997; Slavin, 1981), however, CL, as defined in the early accounting literature 'is a pedagological technique that requires students to work together in small, fixed groups on a structured learning task' (Lindquist & Abraham, 1996, p. 113). It is described as a philosophy of classroom instruction that encourages significant interaction between students in learning curriculum content (Cottell & Millis, 1992); 'to achieve a common goal; mastery of a concept; solution of a problem; or accomplishment of an academic task' (Caldwell & Weishar, 1996, p. 19). The different strategies and techniques used are determined and controlled by the lecturer/tutor. In the accounting literature, 'structure' is nominated as the most essential feature of CL, as it provides the necessary support mechanism for CL (Cottell, 2010; Cottell & Millis, 1992; 1993). Ravenscroft et al. (1999) explained that in the CL classroom, structured group tasks can reduce 'free-rider' and time management problems, because the instructor controls the time spent on each task and assigns tasks for each group member to perform (Peek, Winking & Peek, 1995). It is also argued that negative experiences of group work tend to originate from situations that are less structured than CL (Cottell & Millis, 1993).

Within the accounting literature, CL strategies and techniques have been widely researched and promoted for their ability to facilitate active deeper learning (Ravenscroft et al., 1999), and to develop students' teamwork skills (Millis, 2010), although notably there is a distinct focus on curriculum content (Cottell & Millis, 1992). CL first appeared in the accounting education literature in the 1990s, with descriptive advice on its implementation (Cottell & Millis, 1992; 1993; Peek et al., 1995; Sullivan, 1996), and reports on a series of experiments designed to test the effectiveness of various CL

strategies being introduced to accounting classrooms. The CL approaches varied, and included (for example): assigned classroom study groups (Parry Jr, 1990); group grading incentives (Kunkel & Shafer, 1997; Ravenscroft, 1997; Ravenscroft, Buckless, McCombs & Zuckerman, 1995); group exams in tax (Hite, 1996); exam preparation using team problem-solving workshops (Ciccotello & D'Amico, 1997); Jigsaw II (individual and group quizzes) (Lindquist & Abraham, 1996); and team-games-tournaments (TGT) (Tanner & Lindquist, 1998). Keddie and Trotter (1998) provided details about a series of methods used to encourage participation in tutorials such as: syndicates with a review panel; contracts; role playing/debates; ice breakers; pyramids; and parallel groups. To consolidate, Ravenscroft et al. (1999) suggested that 'all cooperative learning techniques can be characterized as a form of group discussion' (p.164), although, notably, the key focus for measuring the effectiveness of each of the above mentioned CL strategies was (and continues to be) academic performance outcomes in exams, as well as attitudinal surveys.

Given the focus on content and academic achievement, it is not surprising that some CL results reported are inconclusive (Caldwell & Weishar, 1996; Ciccotello & D'Amico, 1997; Clinton & Kohlmeyer, 2005; Hosal-Akman & Simga-Mugan, 2010; Parry Jr, 1990), and others are inconsistent. For example: positive performance outcomes and preferences for group work were reported by Hite (1996), Hwang, Lui and Tong (2005; 2008), and Opdecam and Everaert (2012); whereas Ravenscroft, Buckless and Zuckerman (1997), Lancaster and Strand (2001), and Gabbin and Wood (2008) found no significant differences between the exam performance of traditional lecture/tutorial student cohorts and those exposed to CL strategies.

Overall, the accounting education literature remains divided on the effectiveness of group learning from a CL perspective (Gabbin & Wood, 2008; Opdecam & Everaert, 2012). Controversy over claims of performance achievements have also divided the leading educational psychologists in CL, particularly in relation to the specific conditions under which positive effects occur (Johnson & Johnson, 1989b; Slavin, 1988; 1989). Student demographics, such as gender, nationality, and ability, have also been found to significantly influence the effects of CL on accounting performance achievement and student perceptions of skills development (Curşeu & Pluut, 2013; Opdecam, Everaert, Van Keer & Buysschaert, 2014). Clearly group learning is a complex maze of inputs and

processes, and these mixed results provide a timely opportunity to undertake further research in the area (Apostolou et al., 2010).

2.4.1 Analysing the key elements of cooperative learning

Following CL theorists, (Johnson & Johnson, 1989a; 1989b; 1999; Slavin, 1985; 1995), the success of CL strategies in the accounting classroom are commonly espoused to depend on five key elements being achieved: positive interdependence; individual accountability; face-to-face promotive interaction; social skills; and group processing (Ballantine & McCourt Larres, 2007; Caldwell & Weishar, 1996; Cottell & Millis, 1992; 1993; Opdecam & Everaert, 2012). The most important of these, positive interdependence and individual accountability (Kunkel & Shafer, 1997; Ravenscroft et al., 1995; Slavin, 1983b), are described by Millis (2010) as 'two givens' in the CL literature. It is noted for example, that individual accountability is 'probably the most abused principle in other less-structured forms of group work' (p.5), because too often students are awarded grades to which they are not entitled. The issue is that teachers simply apply the same mark to all group members without taking account of how students have individually contributed to group work or indeed that individual students have met the specified learning outcomes.

Contrary to criticisms that accounting education lacks theoretical foundation (Apostolou et al., 2015; Apostolou et al., 2013), the accounting CL literature has adopted, almost exclusively[10], Johnson and Johnson's (1989) five variable model for CL. Johnson and Johnson (2009) explain that the widespread use and global success of CL is due to the strength of the relationship between theory, and extensive research and practice. Notably however, few accounting education authors address the theoretical underpinnings, other than acknowledging that CL is grounded in these elements, and providing useful examples of how they might be applied (Ballantine & McCourt Larres, 2007; Clinton & Kohlmeyer, 2005; McConnell & Sasse, 1999; Strand Norman et al., 2004; Tanner & Lindquist, 1998). Making assumptions about CL strategies implemented, and inferring that CL is instructionally effective based on these assumptions, is a limitation that affects many CL studies (Slavin, 1988), and is often a noted limitation in accounting education research (Apostolou et al., 2013).

[10] Team based learning (TBL), a model developed by Michaelsen (1992), which is also used and reported on in the accounting education literature, will be discussed later.

Nevertheless, with the passage of time, the CL research in accounting has evolved to include different types of CL, not just as a classroom instructional technique, although the type of CL is rarely discussed or explained. There are essentially three ways in which CL is utilised in university classrooms: formally, informally, and using long term base groups[11] (Johnson & Johnson, 2009). These approaches can be integrated or used separately. Furthermore, 'any course requirement or assignment can be structured to be cooperative' (Johnson & Johnson, 2009, p. 373). The common essential feature required in all applications however, is the preservation of those five key elements (Johnson, Johnson & Smith, 2007). Recent CL research in accounting has focused on various aspects of these elements, although the paucity of research on the most important element, 'interdependence', is a notable exception[12]. Social skills and the assessment of teamwork skills (as opposed to the product or task outcome) are also areas that have been neglected in the accounting literature (De Villiers, 2010). Group processing tends to be evaluated as part of an overall analysis of student perceptions and satisfaction with the CL experience (Ballantine & McCourt Larres, 2009; Farrell & Farrell, 2008; Hilton & Phillips, 2010; Opdecam & Everaert, 2012; van der Laan Smith & Spindle, 2007), so there is little specific evidence on the efficacy of the five elements for supporting group work learning activities in accounting.

2.4.1.2 Individual accountability and group formation

Due to their problematic nature and potential negative impacts on group learning, two elements that are attracting specific research attention in accounting, are individual accountability and group formation.

CL studies focusing on individual accountability highlight the problem of free-riders[13] and group assessment (Akindayomi, 2015; Ballantine & McCourt Larres, 2007; Ellis, Riley & Shortridge, 2015; Gammie & Matson, 2007), but again results are mixed. In an attempt to provide a more reliable and valid method of assessing a group project,

[11] 'Typically, cooperative base groups (a) are heterogeneous in membership, (b) meet regularly (e.g., daily or biweekly), and (c) last for the duration of the semester, year, or until all members are graduated' (Johnson & Johnson, 2009, p. 374).

[12] Hilton and Phillips (2010) included a three item measure of task interdependence; however the construct was categorised with other group processes and analysed in combination. The importance of this element will be discussed further in Chapter 3.

[13] Free-riders, also referred to as social-loafers, are individuals who 'reduce the effort that they make towards some task when working with others' (Reber & Reber, 2001, p. 690)

Gammie and Matson (2007) introduced a peer and self-assessment component. However the ensuing final group grades were inflated, rendering the trial ineffective. Gammie and Matson (2007) reported that almost universally there was evidence of unequal contributions and free-riders in every group. In contrast, Akindayomi (2015) found free-riders were not prevalent. He tested a structured five stage process called a customised assessment group initiative (CAGI), which included a sequence of individual and group tasks and regular peer reviews. Subsequent results showed substantial improvements in student performances. This result may be indicative of the importance of teaching students how to give and receive feedback, and therefore providing legitimate and useful opportunities to identify individual contributions while learning together in a staged feedback process (Ellis et al., 2015).

Ballantine and Larres (2007) required students to keep individual learning logs to record details of their individual contribution. Reflections from each member of a group were collated and presented as a group-learning log (although not assessed). However, the learning logs were not well received. Ballantine and Larres (2007) found a degree of tolerance for free-riders, and an unwillingness to partake in a mechanism that was perceived to have no value, for grades, or for reporting on peers, after the task was completed. Despite one of the essential components (individual accountability) not being fulfilled, Ballantine and Larres (2007; 2009) still found students' perceptions of group work were positive. Although peer and self-assessment is a commonly used strategy for enforcing individual accountability, and is an essential component in team based learning (TBL) (Michaelsen & Sweet, 2008), these findings highlight ongoing inconsistencies, specifically with individual accountability in group learning. It is also difficult to reconcile findings that claim successful implementation of CL strategies when at least one of the key components is missing.

Based on the principles of CL, group formation and management, group assessment and tutor instruction were identified by Ballantine and Larres (2007) as the key issues that needed to be addressed, in order to create an authentic CL environment. However, group formation in CL also has a long history of divergent opinions. The essential element 'face-to-face promotive interaction' was initially identified in the accounting education literature as the need for 'appropriate team formation' (Cottell & Millis, 1992, p. 95), with the issue of what constitutes an appropriate mix and size of groups being contentious. Peek et al. (1995) stated that 'CL techniques are based on the

premise that in the real world students will work in heterogeneous groups to solve problems' (p.112). However, the original aim of heterogeneous grouping in CL was based on Allport's 1954 Contact Theory of Interracial Relations (Slavin, 1981). It was argued that if students of different ethnicity were assigned to groups, 'where each individual can contribute substantially to the mutually desired goal, then students will learn to like and respect one another' (Slavin, 1981, p. 657). In reality, it is the nature of the cooperation that is most important, hence Johnson and Johnson (1989) emphasised 'promotive interaction', rather than simply focusing on group formation[14]. Notably, very few accounting studies identified with the 'promotive' aspect of group interactions, with the exception of Gabbin and Wood (2008) and Ramsay, Hanlon and Smith (2000). The more popular reference was to 'face-to-face interaction' (Ballantine & McCourt Larres, 2007; 2009; Cheng & Chen, 2008; Hite, 1996; Lindquist & Abraham, 1996; Tanner & Lindquist, 1998).

Nevertheless, proponents of heterogeneous grouping continue to be committed to its effectiveness in the accounting CL classroom (e.g. Ballantine & Larres, 2007; Bryant & Albring, 2006; Cottell, 2010), while others argue that heterogeneity is not an essential component of CL (Millis, 2010). In fact for higher performing students in a management accounting course, van der Laan Smith and Spindle (2007) found that self-selected homogenous groups were more effective. Hilton and Phillips (2010) reported however, that group formation, whether heterogeneous, homogenous, random, stratified, assigned, or self-selected, did not significantly influence group performance.

2.5 Team Based Learning

Team-based learning (TBL), previously referred to as Team Learning (Michaelsen, Watson, Cragin & Fink, 1982), is another structured form of group learning that has been reported in the accounting education literature (Lancaster & Strand, 2001; McConnell & Sasse, 1998; Reinig, Horowitz & Whittenburg, 2014; Reinig, Horowitz & Whittenburg, 2011a; 2011b; Reinig, Whittenburg & Horowitz, 2009). TBL is an instructional strategy that combines a set of learning activities in a particular sequence over the course of a semester via group work (Fink, 2004). Although accounting education writers commonly treat TBL as a variant of CL (see for example: Hite, 1996; Cottell and Millis, 1992;

[14] Despite the advent of online group work and cooperative learning, Johnson and Johnson (2016) continue to advocate a preference for face-to-face groups to help facilitate promotive interactions.

McConnell and Sasse, 1998; Lancaster and Strand, 2001; Ravenscroft et al, 1999; Strand-Norman & Rose, 2004), the interdependent sequencing of in-class and out-of-class activities distinguishes TBL from CL, which focuses more on independent small group techniques (Fink, 2002). Michaelsen and Sweet (2008) explain that CL emphasises content knowledge, whereas TBL focuses on the application of that knowledge in a three-phase process. The three-phase sequence includes: preparation (using the readiness assurance process (RAP)[15]; application (using progressively more complex problem-solving activities), and assessment (that promotes learning and team development).

The TBL philosophy is underpinned by four essential principles:

1. Strategically formed and managed permanent groups;
2. Individual accountability (peer evaluation is essential);
3. Frequent and immediate performance feedback; and
4. Assignment design (true group interaction is essential) (Michaelsen, Knight & Fink, 2004; Michaelsen & Sweet, 2008; 2011).

In accounting education, TBL approaches have had mixed results. Positive performance results were reported by Reinig et al. (2009) and Johnson and Smith (1997), but only under certain conditions[16]. Johnson and Smith (1997) also observed some bias with peer evaluations from international students. Student attitudes and satisfaction with TBL also varied across different aspects (Reinig et al., 2014; Reinig et al., 2011a; 2011b). Notably however, no accounting study appears to have implemented TBL in its purest form. Like others, accounting educators have tended to 'borrow' from the TBL camp and mainly adopted the content focused mini-tests associated with RAP, neglecting the final application and assessment phases of TBL. This is not TBL (Fink, 2004; Michaelsen & Fink, 2008). The modified TBL is justified for different reasons. For example, RAP alone is easier to implement (Reinig et al., 2011a); TBL and CL are one and the same (Lancaster & Strand, 2001); and to maintain traditional lectures (McConnell & Sasse, 1998), all of which more appropriately sit beneath the umbrella of cooperative learning techniques.

Nevertheless, TBL and CL share three common foci:

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[15] RAP requires students to complete a short individual test (the individual readiness assurance test (iRAT)), after which they complete the same test again as a group (the team readiness assurance test (tRAT). Marks are assigned to both tests. Feedback is provided immediately and students are encouraged to write evidence-based appeals if they wish to dispute an answer. A short lecture then follows to clarify key points (Sweet & Michaelsen, 2012).

[16] For example, Reinig et al. (2009) found significant improvements for low performing students and where greater knowledge disparity existed within groups.

- Structure (of groups and activities);
- Interpersonal relationships; and
- Accountability (Grant-Vallone, 2011).

2.6 Casual and 'traditional' group work in accounting

Fink's (2004) third category of group learning in higher education is the casual use of group work. It is characterised as 'ad hoc'; with little or no advanced planning; no assessment; and no need for group formation or course structure (Fink, 2004). The extent to which casual group work is used in contemporary accounting classes is likely to be extensive, although difficult to verify. One type of casual group work that has been researched is the use of voluntary study groups in accounting. Leveson (1999) found their first year students appreciated the social connectedness of study groups but would have preferred more formal organisation. Tempone and Martin (1999) interviewed students who were offered the opportunity to work in formally assigned study groups to complete individual assignments. They found significant variation in the ways students made use of the group learning environment and aligned the different tactics to students' propensity for surface or deep approaches to learning. However, it is unclear how the individual task outcome might have affected results because the sense of interdependence and individual accountability was not essential.

Clearly, there are many different ways to use group work, and good and bad ways to implement it in educational settings (Fink, 2004). Notably the literature in accounting is mainly representative of innovation pockets, being reported and tested by committed academics, and for the most part in single classes, at one institution, and one point in time. Poorly implemented approaches or even mediocre attempts to incorporate collaborative experiences are rarely reported. Inevitably therefore 'traditional' [17] group work is characterised in the literature as unstructured and problematic. Clinton and Kohlmeyer (2005) argued that CL should not be confused with traditional group work, which does not necessarily depend on the key ingredients of CL. Like Cottell and Millis (1993), Ballantine and McCourt Larres (2009) also suggested that the robust structures employed in CL distinguish the two forms of group learning because 'traditional' group work

[17] 'Traditional' group work is described as 'simple' by Ballantine and McCourt Larres (2009). The main criterion for simple group work is based on an informal/unstructured approach to group formation and ongoing management (i.e. self-selected groups, and 'a laissez-faire approach to group management' by the instructor, with no interference in group workings (p. 391).

'requires little in the way of structure in terms of group formation, instruction and management' (p.388). Given that anecdotally 'traditional' group work is often found to be ineffective and results in negative experiences for students and their teachers, the assertion that there is little need for instruction, formation or management, needs further research.

When comparing student perceptions of CL and 'traditional' group work, Ballantine and McCourt Larres (2009) found that, in the students' opinion, the development of interpersonal and communication skills were significantly more effective for the CL cohort than those doing 'simple group-work' (except for conflict resolution skills, where there was no difference between the two groups). Although the control group (traditional approach) was also taught by the authors, it is unclear how their inherent commitment to collaborative learning approaches may have influenced even a less structured group work scenario used in their classes. Likewise, Dyball et al. (2010) examined student experiences of compulsory group work in the second year management accounting unit that they coordinated. They elicited student suggestions for how group work could be improved and identified three different conceptions regarding the best aspects of a group project: the case; group work; and learning. The 'least' preferred aspects were grouped into two categories: task and group work functioning. Not surprisingly, suggestions for improvement were similarly grouped under 'the task', 'the group'; and 'learning'. However, the distinctions made by categorising the task, the group, and learning, as exclusive conceptions begs further investigation. From a phenomenographic perspective these results could also be suggesting that students view learning as something very different to 'group skills' or using groups for learning. It may even suggest that completing a task is different to 'learning'.

This review of the group learning literature in accounting education has exposed a problem relating to the categorisation and conceptualisation of what group work is, what it should be, how it is researched, and the learning outcomes expected of the technique. There remains one more distinction in terminologies that has caused some debate and confusion in the literature. What is collaborative learning?

2.7 Collaborative learning and the use of group work

Collaborative learning generally refers to a learning approach whereby students not only

support each other in their learning but rely on their peers to define the curriculum,[18] in conjunction with the lecturer (Ravenscroft et al. 1999). The distinction between cooperative learning and collaborative learning is not always clear, and the two are often used interchangeably in the literature (Ballantine & McCourt Larres, 2009; Barkley et al., 2005; Darcy, Gutierrez-Sanchez & Molina, 2006; Edmond & Tiggeman, 2011; Ravenscroft et al., 1999), although others maintain this lack of discrimination undermines important differences (Bruffee, 1995).

Cooperative learning (CL) is described as a very 'structured and delineated subset of collaborative learning because, by definition, all cooperative learning activities involve collaboration' (Cottell & Millis, 1993, p 41). However, Bruffee (1995) argues that collaborative learning was developed for the teaching of adults in universities, and is therefore designed to advance CL principles, which were originally intended for primary school students. Group governance, according to Bruffe's definition, is therefore the domain and responsibility of students, and teachers should not interfere, evaluate group processes, or attempt to eliminate competition. Furthermore, dissent should be encouraged and collaborative tasks designed so that there is no absolute or correct solution to a problem (Bruffee, 1995). Barkley et al. (2005) note that the construction of the learning task, which includes devising procedures to actively engage students in the process, is central to the effective implementation of collaborative learning, although within a culture of negotiated relationships, collaborative group work should be designed to develop students' competence with uncertainty and ambiguity. It assumes university students are experienced social beings and therefore aims to cultivate students' interdependence, and help them become 'autonomous, articulate, and socially and intellectually mature, and it helps them learn the substance at issue, not as conclusive 'facts' but as the constructed results of a disciplined social process of inquiry' (Bruffee, 1995, p. 17).

The generally accepted view of collaborative learning however, is that it is an 'umbrella term for a variety of educational approaches involving joint intellectual effort'

[18] Curriculum is defined broadly in this context to mean 'the students' experience of learning… a process and structure that enables student [engagement in] learning' as opposed to the more narrow understanding of curriculum as the structure and content of a unit or course of study (Fraser & Bosanquet, 2006, p. 275). Barnett and Coate (2005) suggest there are three dimensions to the concept of curriculum: knowing, acting and being, and these are brought together in a coherent relationship to engage students in learning.

(Smith & MacGregor, 1992, p. 11). In accounting, for example, valuable contributions to the group work literature can be found in studies about collaborative learning in workshops (McGuigan, Weil, Kern & Baiding, 2012); case studies (Dyball, Reid, Ross & Schoch, 2007; Scofield, 2005; Wynn-Williams, Beatson & Anderson, 2016); problem based learning (Calk & Carr, 2011; Milne & McConnell, 2001; Stanley & Marsden, 2012); and various experiential techniques, such as role-playing (Fouch, 2004); simulations (Lightner, Bober & Willi, 2007); and field trips (Dellaportas & Hassall, 2013). Dillenbourg (1999) explains that collaborative learning encapsulates many different meanings of collaboration, learning, and ways of measuring the relationship between the two, in combination. Despite the 'terminological wilderness' (p. 7) that surrounds the collaborative learning literature, Dillenbourg (1999) suggests there are four key criteria needed for understanding collaborative learning: the situation; interactions; processes; and the effect. Clearly, if collaborative learning is adopted and research efforts are to advance and improve the nature of group work at university, it is important to consider all aspects holistically. These components will be explored further in Chapter 3.

2.8 Overview of accounting group work

Given the various perspectives of group learning discussed in this chapter, it appears that in accounting education, structured in-class group activities have traditionally followed the early CL approach, which includes TBL. The term collaborative learning is more generic and helps situate the casual use of group learning, and the 'traditional' or unstructured group work activities or projects where there is little guidance provided by the teacher. It is this type of group work that likely dominates the accounting education landscape, although often not reported and hence criticised in the literature or used as justification for innovation in the area. It is feasible that for many accounting academics, their approach to group work may be grounded in the belief that, like Bruffee (1995), collaborative learning needs to be unstructured to develop students' competence with ambiguity and/or autonomy. Alternatively, their attitudes to collaborative learning and the teaching and assessing group work may be influenced by environmental characteristics such as large classes, diverse students and excessive workloads, and/or their personal experiences with group work. In a study of 1064 academics'[19] attitudes to

[19] The sample participants were from a cross-section of disciplines at 16 Australian universities. Only 15% were from Management/Commerce, with an unknown number from accounting.

graduate skills, de la Harpe et al. (2009) found academics were 'least confident and willing to teach and assess teamwork (and ICT)' (p. iii). They concluded that these results have 'serious implications for the ability of universities to make claims about graduate readiness for professions and industries where such attributes are required' (p. 60).

The overall environmental context of accounting education (outlined in section 2.1), has historic links to a political realm in which the discipline, the profession, institutions, and successive governments have been ensnared for many decades. The resultant policy changes and challenges that have ensued, including skills based learning outcomes, which are now mandated by legislation, and the apparent confusion with skills development and the conceptual differences that abound, highlight the need for further research in this area.

2.8.1 Intercultural influences on group work in accounting

It is pertinent to note at this point that the dramatic increase in the number of international students studying accounting in Australia in recent years has also added a cultural dimension to the teaching and learning environment that cannot be overlooked. This is noteworthy because the prescribed threshold learning standards for all Australian accounting graduates includes the ability to work with team members from various cultural backgrounds (as mentioned in Chapter 1). Of particular significance are the statistics that show the accounting discipline in Australian universities has the largest number of international students (Guthrie et al., 2014) and therefore potentially the greatest opportunity to expose all accounting students to cultural diversity and develop intercultural competencies, particularly through the use of group work activities. Prior research that has found however that within the higher education context, multicultural groups 'experience more difficulties than homogeneous groupings' (Strauss, U & Young, 2011, p. 815). This is an important consideration when researching the conceptions and perceptions of group work in accounting.

There is some consensus that international students have a preference for group learning because of perceived benefits in helping them to overcome language, knowledge, and cultural barriers (Moore & Hampton, 2015; Summers & Volet, 2008), although the value in this interaction is perceived to be greater during informal group work activities (Li & Campbell, 2008). There is little evidence that teamwork skills are being developed. In fact, the research suggests that university students generally, domestic and international, monolingual and multilingual, and many of their teachers (Strauss & U,

2007; Zhou, Jindal-Snape, Topping & Todman, 2008), share a common disdain for assessed group work, in the first instance; and secondly, display negative attitudes to diverse multicultural group work (Li & Campbell, 2008; Mak & Kennedy, 2012; Montgomery, 2009; Strauss et al., 2011; Summers & Volet, 2008; Volet & Ang, 2012; Zhou et al., 2008). Summers and Volet (2008) conclude that generally 'students' experiences of group work at university are not serving the educational and social goals of internationalisation' (p. 368).

Freeman et al. (2009) identified significant gaps in the literature, and a general lack of guidance for academics, to embed intercultural competencies into the business curriculum, and how best to address the challenges faced by students and staff in the multicultural tertiary environment. Zhou et al. (2008) suggest that merely asking for mutual and reciprocal understanding of cultural differences is naïve without better understanding the processes involved. In a recent accounting study, Daly, Hoy, Hughes, Islam and Mak (2015) reported success using the EXCELL[20] training system to help develop practical social competencies for international students. Notably, cultural learning was assumed for all students based on student self-reported responses to a 12 item questionnaire, where all questions were positively framed in relation to cultural awareness alone. There was no indication of other group work outcomes or if students differentiated between their learning of content, teamwork skills, and having a better awareness of cultural differences. Further research is required to clarify teacher and student expectations, and to unpack how students can realise the opportunities and benefits of working together in culturally diverse groups (Freeman et al., 2009; Volet & Ang, 2012; Zhou et al., 2008).

2.9 Conclusion

Consistent with Dillenbourg's (1999) observation of the key components of collaborative learning, this chapter has outlined: the situational context for accounting education; highlighted potential influences on the interactions between accounting academics, students, and their respective peers; and reviewed the relevant literature pertaining to cooperative learning, team-based learning and collaborative learning in accounting. The focus of this review was to identify the key features, processes, and forms of group work

[20] Excellence in Cultural Experimental Learning and Leadership training system developed by Mak, Westwood, Barker and Ishiyama (1998).

and the group learning techniques being used, researched and reported in the accounting education literature. The effect of identifying the gaps in the literature establishes the research questions presented in Chapter 1. The underpinning theoretical models will be examined in detail in the following chapter.

Chapter 3: A theoretical framework

3.0 Introduction

This chapter explores various theoretical perspectives that have been used to explain group work, group dynamics, and cooperative learning in the higher education context. It follows the review of the literature related to group work in accounting education, discussed in Chapter 2, and draws on other fields of research, particularly from educational psychology, and the social learning theories emanating from this discipline. A constructivist epistemology informs the overall theoretical perspective undertaken with social learning theories and is therefore central to the emergence of interdependence as the key framework to underpin this study.

This chapter also historicises the literature and relevant learning theories in a way that is consistent with a holistic Vygotskian perspective. Vygotsky argued that it was important to understand the historical and cultural contexts in which social interaction and learning take place (Vygotsky, 1978, p. 83; 2004).

The following review will begin by defining what 'group work' means in the literature. Section 3.2 provides a portrait of the interlinking elements of parallel group learning theoretical perspectives, with subsequent sections detailing important aspects of each. This chapter concludes with an overall conceptual framework to guide the remainder of the study.

3.1 What is group work?

The challenge in defining group work or answering the question 'what is group work' is that it is multi-faceted not only in terms of approach and pedagogical strategies, but also in the conceptualisation of what constitutes a group. There are many definitions and social scientists often disagree on key aspects (Jaques & Salmon, 2007; Johnson & Johnson, 2013). Nevertheless, in reviewing various working definitions of groups, some consistencies can be identified.

Theorists agree for example, that the nature of group member interactions helps to differentiate between small and large groups; and the connection through a social relationship distinguishes a group from a random collective of individuals gathered in one place (Forsyth, 2010; Johnson & Johnson, 2013). Whether groups are primary[21],

[21] Small, intimate, long-term groups such as family and close friends.

secondary[22], planned or an emergent circumstantial type of group, the central features that are common across the different theoretical positions include: that people in groups must interact (on a task level and through interpersonal relationships); the interaction experience is governed by group structures (roles, norms and relationships); cohesion determines the level of unity; and interdependence and goals are created among group members. What is more, the underlying fundamental research assumptions are that groups and group processes are real; groups are dynamic systems that are more than the sum of their individual parts; and groups are influential and not only shape society, but are also psychologically significant for individual members (Forsyth, 2010; Johnson & Johnson, 2013).

In the Organisational Behaviour (OB) literature, groups and teams are differentiated by reference to performance outcomes. For example, a work group is defined as 'a group that interacts primarily to share information and to make decisions to help each group member perform within his or her area of responsibility'(Robbins, Judge, Millett & Waters-Marsh, 2008, p. 334), whereas a team is 'a group whose individual efforts result in a performance that is greater than the sum of the individual inputs' (p. 334). Similarly, Bell and Smith (2011) align the characteristics of a work team to that of sporting teams, whose prime purpose is to achieve performance goals. Jaques and Salmon (2007, p. 6) also distinguish groups as 'people who come together to share knowledge, for personal development or to learn from each other through discussion', as opposed to teams who are 'engaged in a task or project geared towards an end product or decision'.

3.1.1 Product or process?

The group work task, product and/or outcome have tended to dominate the literature in accounting education and more broadly in higher education, as alluded to in Chapter 2. For many students, the success of group work encounters is measured by proxy based on task achievement; similarly many academics simply assess the end product of a group work task. Jaques and Salmon (2007) suggest that this disproportionate focus on the product of group work has evolved because it is more easily defined and examinable. Process, on the other hand, which includes the emotional, intellectual and behavioural aspects of working together, has received little attention in the higher education arena,

[22] More complex, organised, social groups that 'influence members' attitudes, beliefs, and actions, but as a supplement to the influence of smaller primary groups' (Forsyth, 2010, p. 6), such as work groups or clubs.

despite its direct impact on the effectiveness of group work outcomes (Jaques & Salmon, 2007), and its relationship to environmental and contextual factors, also identified earlier in Chapter 2.

Biggs' (2003) well known 3P (presage, process, product) model demonstrates how teaching and learning is portrayed as a system of antecedent presage factors such as personal attributes and teaching context, interacting through a process of learning-focused activities to influence certain learning outcomes (or products). In this model, process is described as the interpretation of the context and metacognitive activity that informs students' motives and strategies in a learning situation (Biggs, 1989). Process therefore is the combination of motive and strategy and is referred to as the students' approach to learning (SAL) (Duff & McKinstry, 2007). In reviewing the literature for this research, little evidence was found to suggest this model has been used in group work studies other than where the Study Process Questionnaire (SPQ) was used either to measure changes in deep and surface learning approaches before and/or after the introduction of group work activities (Hall, Ramsay & Raven, 2004; Wynn-Williams et al., 2016), or to select participants to be interviewed about group work (Wang, 2012). However, Biggs (2003, p. 17) elaborates further stating that process is about students' '*interactions* between the personal and the contextual'. He identifies the positive feelings of interest, a sense of importance, pleasure and exhilaration that accompanies deep learning and what he refers to in the 3P model as 'appropriate' processes. Other theorists (Duff & McKinstry, 2007; Marton & Säljö, 1976; Prosser & Trigwell, 1999; Ramsden, 2003; Trigwell & Prosser, 1997) have similarly documented the importance of the affective elements in the process stage. Duff and McKinstry (2007) suggest that to improve the process and quality of accounting student approaches to learning generally (not just for group work) 'accounting education must determine students' perceptions of the assessment, the curriculum, and the teaching and support they receive' (p. 186).

3.1.2 Is it more about the people?

Humans are social beings. We live, work, learn, and play in groups. However, the knowledge and skills to work effectively together are not necessarily something that comes naturally. Groups can be destructive as much as they can be constructive (Johnson & Johnson, 2003). It follows then that knowledge of team work skills and group processes is an important element in ensuring the effectiveness of collaborations within higher education. Nevertheless, Baker et al. (2013) point out that it is often taken for

granted that the primary purpose and the overall objective of group work is to achieve *effective* outcomes in various ways. They argue however, that in making such assumptions, many educationalists, researchers, and theorists overlook the *affective* or emotional outcomes that impact directly on students. As individuals, we are to a large extent a product of our group memberships and these interactions inevitably influence our successes and failures; our values and beliefs; our physical, emotional, and psychological well-being (Johnson & Johnson, 2003). Groups are recognised as a critical source of knowledge construction (Bandura, 1977b; Van den Bossche, Gijselaers, Segers & Kirschner, 2006; Vygotsky, 1978), and their importance to learning in the educational setting cannot be overemphasised (Johnson, Johnson & Smith, 2013; Slavin, 1995). Therefore it is critical that the people (the students) themselves and the associated feelings and emotions aroused through group work interactions are better understood and considered more holistically as an integral part of collaborative learning approaches (Baker et al., 2013). Baker et al. (2013, p. 3) suggest that the question that needs to be answered is 'what is going on from the students' points of view?' This study aims to address this question, among others.

3.2 Triadic theoretical dimensions

There are many dimensions to the study of group work, many theories, many methods, strategies, tools, guidelines and instructions, that to attempt to reduce an exploratory study such as this to a single theoretical perspective on group work is futile. Instead it seems appropriate to embrace key components from a range of perspectives and, in line with the approach taken by Baker et al. (2013), seek common themes and bridges to link them. Denzin (1989) considers this type of theoretical triangulation 'an integral feature of the research process [particularly] in those areas characterized by a high degree of theoretical incoherence [such as] contemporary theory in the area of small-group analysis, for example' (p. 240). The following sections will therefore highlight relevant key dimensions in prior work and propose a framework for this study.

3.2.1 Key dimensions in social learning frameworks

A review of seminal works and more recent developments in the various fields of research relating to collaborative and cooperative learning, small groups, and organisational teamwork, suggests that a number of synergies exist. Most notably they commonly describe triadic interactions among key dimensions. Table 3.1 provides a summarised list

of the key dimensions identified in some of the main social learning and team-skills frameworks, along with the author/s and their respective areas of research. Not surprisingly, across time and domains, three key components dominate in the study of groups: the group/social perspective, the individual perspective, and various contextual or environmental aspects. From the broadest viewpoint, Kurt Lewin (1945) proposed that psychology, sociology and cultural anthropology needed to be integrated in theory and methods to appropriately study group life. He explained that to understand group interactions in all forums it was not only important, but there was an urgent need, to incorporate perspectives of the individual, social systems, and cultural context, in combination, referred to as the 'life-space' or 'field' (Lewin, 1943). At the beginning of the third millennium, the focus on this triad has not waned.

From an historical perspective, the main difference in the key dimensions of group learning research appears to be the particular contextual emphasis relevant to the period of time the theory was being espoused. For example, the catalyst for Lewin's (1945) urgency to address group dynamics, and Deutsch's (1949) work on conflict, cooperation and competition, was World War II; interest in cognitive processes was influenced by the dawning of the computer age in the late 1950's and 60's (Hilgard, 1996); and in the early 21st century, globalisation and internet-based information and technologies subject us to interwoven and multi-layered networks, driving a greater emphasis on theoretical integration rather than simply extending existing theories to encapsulate social interactions. It is also highlighting a need to better understand the affective and emotional as well as social, economic and cognitive dimensions of working and learning together (Baker et al., 2013).

What is not immediately apparent in Table 3.1 however, is this evolution of the respective theories and how they have developed in close proximity to each other. Baker et al. (2013) point out, for example, that collaborative learning research has generally been framed from a socio-cognitive and behavioural perspective with little reference to the study of group dynamics. Recognising the interdisciplinary gaps, Baker et al. (2013) urge collaborative learning research to embrace the issues of interpersonal relationships, social representations, and emotions, which have been addressed more readily in the group dynamics literature.

Table 3.1 Key dimensions identified in social learning and team-skills frameworks

Author/s	Field	Topic/Theory	Key dimensions 1	2	3
Lewin (1947)	Social Psychology	Group dynamics theory	Psychology	Sociology	Cultural anthropology
Deutsch (1949)	Psychology	Social interdependence theory	Cooperative	Competitive	Individualistic
Deutsch (1949)	Psychology	Social interdependence theory	Goal achievement	Situational context	Bidirectional
Vygotsky (1978)	Psychology	Socio-cultural theory	Culture	Communication	Cognition
Skinner (1953)	Psychology	Operant conditioning	Social behaviour	Personal control	Group control
Bandura (1977; 1986)	Psychology	Social cognitive theory	Personal	Behaviour	Environment
Bandura (1991)	Psychology	Social cognitive theory	Individual agency	Proxy (social) agency	Collective agency
Slavin (1995)	Educational Psychology	Cooperative learning	Group goals/rewards	Ind. accountability	Group structure
Slavin (1996)	Educational Psychology	Cooperative learning	Motivational perspective	Social Cohesion	Cognitive perspective
Johnson et al. (1998)	Educational Psychology	Cooperative learning	Social interdependence	Cognitive developmt	Behavioural learning
Johnson & Johnson (1989)	Educational Psychology	Cooperative learning	Formal	Informal	Long term groups
Johnson & Johnson (1989)	Social Psychology	Social interdependence theory	Positive interdependence	Negative interdepend.	No interdependence
Johnson & Johnson (1989)	Social Psychology	Positive & negative interdep.	Outcome	Means	Boundary
Johnson & Johnson (2003)	Social Psychology	Positive interdependence	Effort to achieve	Pos. interpersonal rel.	Psychological health
Greeno (2006)	Sociocultural psychology	Situated learning	Activity systems	Individual cognition	Interaction
Michaelsen & Sweet(2008)	Education	Team based learning (TBL)	Grp formation & mgmt	Ind. accountability	Feedback & task design
		TBL(1) Grp formation	Resources	Cohesiveness	Development
		TBL(2) Ind. accountability	Preparation	Contribution	Quality performance
		TBL(3) Feedback & design	Frequent & immediate feedback	Interaction	Decision making
Perry & Winne (2013)	Educational Psychology	Interpersonal regulation	Self-regulation	Co-regulation	Shared-regulation
Volet et al (2009)	Educational Psychology	Interpersonal regulation	Individual	Social entity	Social context
Barker et al (2013)	Education	Collaborative learning	Cognitive	Social	Affective
Druskat & Wolff (2001)	Psychology	Emotional intelligence	Trust	Group identity	Group efficacy
Jehn & Mannix (2001)	Psychology	Intragroup conflict	Relationship conflict	Task conflict	Process conflict
Tjosvold (1986)	Business & Management: Organisational Behaviour	Goal interdependence theory	Organisational structure	Goal interdependence	Interpersonal attitudes & values

Cooperative learning research, on the other hand, has a direct ancestral linkage to Lewin's (1945) group dynamics and Field Theory, through his student, Marton Deutsch, and his Theory of Social Interdependence (Deutsch, 1949). Social Interdependence Theory has been further developed by Deutsch's student, David Johnson, and applied to the study of cooperative learning since 1949 (Johnson & Johnson, 1989a). Forsyth (2010, p. 52) points out that these 'different theoretical perspectives [on group dynamics] are not mutually exclusive paradigms'.

The key link that unifies postmodern constructivist perspectives is, first and foremost, that learning and understanding are inherently social (Palincsar, 1996), but more specifically that interdependence is the underpinning construct. John-Steiner and Mahn (1996) explain that the overarching focus of knowledge co-construction from a sociocultural perspective is the interdependence of social and individual processes. For theorists in the group dynamics arena, Kurt Lewin's proposal that 'the essence of a group is the interdependence among members that results in the group being a *dynamic whole*' is fundamental to their historical roots (Johnson & Johnson, 2013, p. 88).

The following sections will therefore focus on interdependence and briefly review the historical connections social learning theories have to each other through this concept.

3.3 The social learning dimension and interdependence

Eighty years ago the defining central tenet being developed in Vygotskian theory was the emphasis on social interaction and the importance of social and cultural influences on learning and development (Holzman, 2009; Rieber & Robinson, 2004; Vygotsky, 1978; Wertsch, 1985). For Vygotsky, the development of higher mental functions was not only socially determined but by its very nature social *and* individual (Matyushkin, 1997) [emphasis added]. Therefore, instead of studying an individual's development in a group, he argued we should be examining how group relations transform the individual. John-Steiner and Mahn (1996, p. 192) refer to this conceptualisation of socio-cultural interactions as the 'dynamic interdependence' of individual and social processes.

As illustrated in Figure 3.1, which is an adaptation of the general theoretical perspectives that have guided research on cooperation and learning (Johnson & Johnson, 2003; 2013), interdependence underpins three key theoretical frameworks: the behavioural perspective of socio-cognitive learning theory; the developmental focus of socio-cultural learning theory; and social interdependence theory (SIT). Behaviouralists and the socio-cognitive perspective focus on reward and task interdependence; the socio-

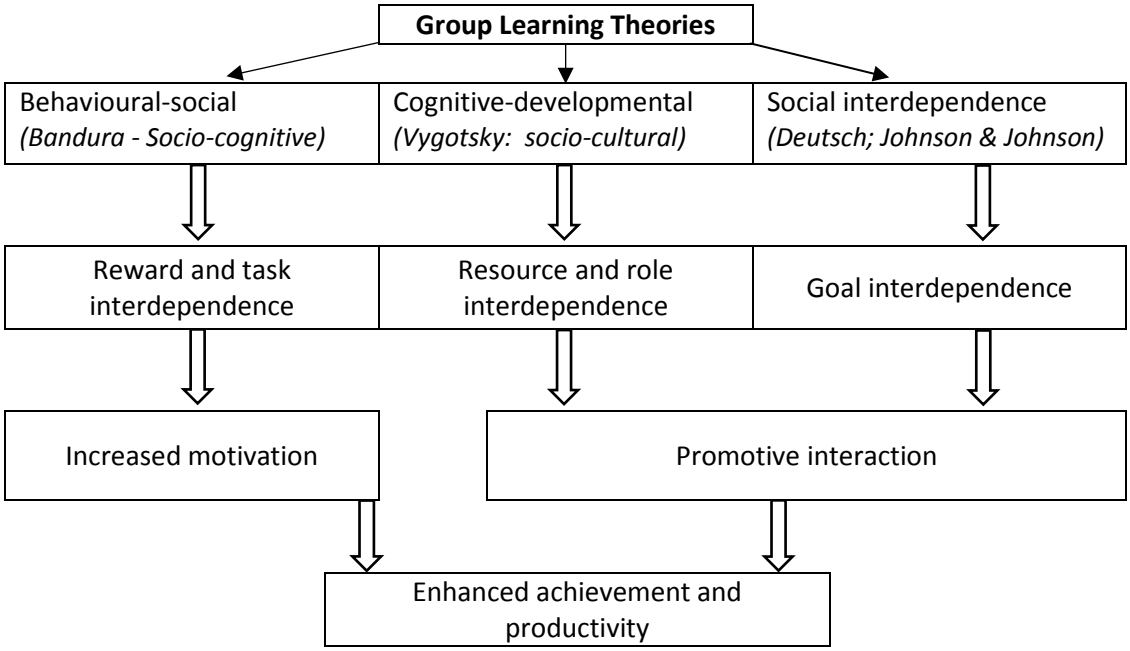
cultural perspective of interdependence is centred on more resource and role interdependence; whereas the focus of SIT is goal interdependence. Through positive promotive interactions (from the perspective of SIT and socio-culturalists) and the increased motivational goals of the socio-cognitive perspective, all ultimately aim to enhance learning outcomes through achievement and productivity in group learning. Importantly, research on SIT has found that achievement outcomes are not limited to academic performance but also include the quality of relationships between group members and the psychological health, self-esteem and social competence of participants (Johnson & Johnson, 2003; 2013; Johnson & Johnson, 1989a; 2005a). In combination, these theoretical perspectives provide the underpinning structure for this exploration of group work in accounting education.

3.3.1 Behavioural foundations

Learning, from the behaviourist perspective, occurs during interactions between the learner and the environment, specifically through the formation of associations between stimuli and responses (Schunk, 2004). Although out of vogue because of its simplicity, it is clear that behaviourist strategies have influenced contemporary educational psychology through the use of reinforcers and conditioning (in their various forms) to

Figure 3.1 General theoretical perspectives for group learning

Source: Adapted from Johnson and Johnson (2003, p. 93)



teach new skills, reduce unacceptable behaviours, and establish strategies to help learners master new skills (Vialle, Lysaght & Verenikina, 2005). The use of group rewards in the classroom is derived directly from the behaviourist perspective (Slavin, 1987b). In addition Jaques and Salmon (2007) credit behaviourism with the development of learning objectives and learning outcomes in higher education and the way in which objectives within unit outlines are written in behaviourist terms.

Behaviourists have also applied their theories to groups and cooperative learning (Slavin, 1996). Although rarely cited in relation to group work, Skinner (1953, p. 298) for example, explained that 'social behaviour arises because one organism is important to another as part of its environment'. Furthermore reinforcement often requires the presence of other people and 'social stimuli are important to those to whom social reinforcement is important' (Skinner, 1953, p. 303). In the same way the behaviourist perspective holds that individuals have the power to manipulate the conditions affecting others and consequently individual group members can be 'subjected to a more powerful control when two or more persons manipulate variables having a common effect upon [their] behaviour' (Skinner, 1953, p. 323). Skinner referred to these conditions as 'personal' and 'group control'.

Whether analysing individual and/or group learning dimensions, an important recognition is that all theories deal with behaviour in some form (Schunk, 2004) and that in any scientific inquiry 'the only available observables are stimuli and responses' (Kimble, 1994, p. 258).

3.3.2 Social cognitive theory

Social cognitive theory was originally referred to as social learning theory (Bandura, 1977b). It was based on the premise that behaviour must be learned and that we learn from one another through observation as well as through experience, subject to biological constraints and development. However, as it evolved and developed, Bandura was keen to re-badge his theoretical perspective of behaviour, to acknowledge a broader environmental context and emphasise the role of cognition (Bandura, 1986). Proposing an interactional model of triadic reciprocal causation (called reciprocal determinism (Bandura, 1978)), the environment, cognitive and other personal factors, and behaviour, were all considered as interacting determinants of each other (Bandura, 1986).

Underpinning this socio-cognitive viewpoint is the concept of agency. Social cognitive theory adopts an agentic perspective, which suggests that individuals

intentionally influence their own functioning and life circumstances through intentionality, forethought, self-regulation, and self-reflection (Bandura, 2006).

But individuals are not autonomous agents. Most endeavours are socially situated and therefore involve other 'participating agents', who also contribute influence. Bandura (2006) explains for example, that 'effective group performance is guided by collective intentionality…[whereby] individuals have to accommodate their self-interests if they are to achieve unity of effort within diversity' (p. 164).

Bandura (2012) claims that 'people exercise their influence through different forms of agency rooted in corresponding types of efficacy beliefs' (p. 12). Each day a blend of agentic modes is utilised: personal, proxy, and collective (Bandura, 2002). For example, you do not always have direct control *(personal agency)* over the things that affect your life but you do have the capacity to influence others who control specific resources *(proxy agency)*. Other things may only be achievable through a collective effort. The extent and manner in which each type of agency is used is often moderated by the specific cultural or environmental context[23]. Furthermore, 'people's beliefs in their capabilities vary across activity domains and situational conditions rather than manifest uniformly across tasks and contexts' (Bandura, 2012, p. 13). Self-efficacy beliefs are created in four main ways: mastery experiences; social modelling; social persuasion; and physical and emotional states (Bandura, 2012). The key components are resilience and confidence. The source of self-efficacy is therefore an important consideration in developing and maintaining healthy approaches to motivation, learning, group work and life in general.

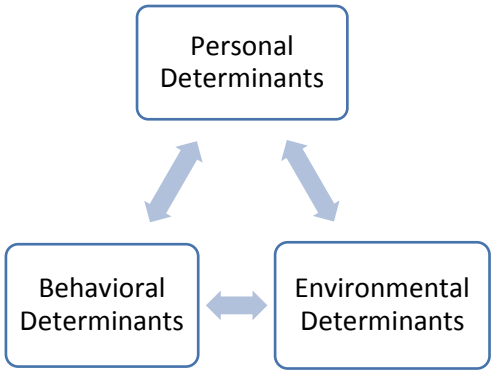


Figure 3.2 Schematization of triadic reciprocal determination in the causal model of SCT
Source: Bandura (2012, p. 12)

[23] Three types of environments are identified – imposed, selected, and constructed environments (Bandura, 2012).

Notably, the socio-cognitive agency framework emphasises the importance of interdependence, not only between behaviour, cognition, and the environment, but specifically in relation to collective agency and collective efficacy. *Collective agency* refers to socially interdependent efforts whereby individuals 'pool their knowledge, skills, and resources, provide mutual support, form alliances, and work together to secure what they cannot accomplish on their own' (Bandura, 2002, p. 270). However, 'collective endeavours require commitment to a shared intention and coordination of interdependent plans of action' (Bandura, 2006, p. 164). This shared belief is referred to as *collective efficacy*, which alone commands an entire research field. However, collective efficacy is not simply the aggregate of the personal efficacy beliefs of individual group members: it is 'an emergent group-level property that embodies the coordinative and interactive dynamics of group functioning' (Bandura, 2002, p. 271), although the processes are similar.

Meta-analytic findings, based on 163 studies from a broad cross-section of disciplines, supports the general consensus that collective efficacy has a positive and significant relationship on team performance (Gully, Incalcaterra, Joshi & Beaubien, 2002; Stajkovic, Lee & Nyberg, 2009), although as noted above, by definition collective efficacy is only a group's overall shared belief in their capabilities for a specific task. Stajkovic et al. (2009) notes that more work needs to be done to assess the extent to which these beliefs are shared. For example, Gully et al. (2002) found interdependence to be a significant moderating variable in the relationship between team (collective) efficacy and performance but not between team potency and performance. Potency is defined as 'a broader perception of team capability spanning tasks and situations', whereas team efficacy refers to 'perceptions of task-specific team capability' (Gully et al., 2002, p. 819). Gully et al. (2002) suggested that interdependence was not as important for potency because it was more about how teams self-organise than on an actual task outcome. Either way, research has consistently found both team efficacy and group potency are linked to team effectiveness (Gully et al., 2002; Stajkovic et al., 2009).

3.3.3 Self- and co-regulation in learning

Building on the work of Bandura, who viewed self-regulation generally as the process of engaging in self-observation, self-judgment, and self-reaction to affect the external environment (Bandura, 1991b; Schunk, 2008), Zimmerman (1989) defined the self-regulation of learning (SRL) as 'the degree to which students are metacognitively,

motivationally, and behaviourally active participants in their own learning process' (p. 329). SRL has developed through an extensive and diverse collection of literature highlighting various phases and processes, models, measurements, strategies and task orientations (Boekaerts, 1997; Efklides, 2011; Loyens, Rikers & Schmidt, 2008; Pintrich, 2000b; Winne, 2010; Zhou & Winne, 2012; Zimmerman, 1986; 1989; 2008; Zimmerman, Schunk & Zimmerman, 2011). However, one area that arguably remains an 'under-theorised' and 'under-examined' field of research is the study of interpersonal regulation, particularly in relation to group work (Volet & Vauras, 2013, p. 2). Volet, Summers and Thurman (2009) for example, suggest that to better understand collaborative learning activities, we need to integrate the current models of regulation from the perspective of both individual (self-regulation) and group (co-regulation). They draw on a systems theory framework which suggests that self- and co-regulatory mechanisms are concurrent and interdependent.

One of the challenges that continue to plague models of social regulation however is a general lack of consistency in defining constructs (Järvelä, Järvenoja, Malmberg & Hadwin, 2013; Volet, Vauras & Salonen, 2009). The terms used are referred to variously as interpersonal regulation, social regulation, shared regulation, co-regulation, high-level co-regulation, and self-regulation in social settings, as well as variants of self and other regulation (Hadwin, Järvelä & Miller, 2011; Volet & Vauras, 2013). Co-regulation occurs when individuals give and receive support in collaboration with peers. However, for some this support can be unidirectional in the form of new information, skills and knowledge that the 'co-regulator' passes on to those in need. The assumption is that the 'co-regulator' is the person with expertise to assist and shape the regulatory activities of others to achieve personal and/or group goals. This concept aligns directly with Vygotsky's Zone of Proximal Development (ZPD). Different group members (or even the teacher) can undertake this role at various times depending on the task, need and situation that arises (Järvelä et al., 2013; Perry & Winne, 2013). The products of the co-regulation of learning in this instance can still be either individual, cooperative or collaborative in nature, however the key characteristics are that the social exchange and interactions are emergent, transitory, mediational, and supportive in promoting or empowering independent self-regulation amongst group members (Hadwin et al., 2011).

Zimmerman et al. (2011) reject the inference that SRL is an individualised form of learning because by its nature it is social, and what others refer to as co-regulation is

actually the central concept of SRL. In order to be effective, a proactive self-regulated learner needs to be able to set goals, implement strategies, monitor and assess their progress through a feedback loop that relies on and references assistance from peers and others. Volet, Summers, et al. (2009) suggest that theoretical differences arise because those expressing a socio-cultural perspective (Hadwin et al., 2011; Järvelä et al., 2013; Perry & Winne, 2013) incorrectly assign a pure cognitive approach to the concept of self-regulation, and therefore see co-regulation as the social support provided to self-regulation. On the other hand, socio-cognitive theorists define co-regulation as 'the dynamic processes of co-constructed knowledge, shared problem solving or other forms of collaborative learning' (Volet, Vauras, et al., 2009, p. 219).

Despite the labels used for these concepts, both sides recognise that regulatory processes and strategies occur on a continuum, with independent individual goals at one end and interdependent shared responses at the other. The key is interdependence. Volet, Vauras, et al. (2009) suggest that the mediating roles that peers play in the regulation of collaborative learning can de distinguished based on the strength of this reciprocity. Co-regulation therefore can be bidirectional, reciprocal or mutual, with the mutual mode of co-regulation representing 'the strongest degree of sharing and symmetry between participants' (Volet, Vauras, et al., 2009, p. 219). For Hadwin et al. (2011, p. 69), co-regulation remains the 'coordination of independent self-regulation amongst group members', and socially shared regulated learning (SSRL) is the 'interdependent or collectively shared regulatory processes, beliefs and knowledge orchestrated in the service of a co-constructed or shared outcome/product'. Despite the challenges, Järvelä et al. (2013) note that most collaborative learning studies implicitly allude to the idea of group members sharing in the regulation of group processes, but there is little empirical research that explicitly examines how individual and shared regulation of learning interact. It remains therefore an area of increasing interest and a rich ground for further research.

3.3.4 Motivation and regulation in groups

From a socio-cognitive perspective, self-regulation is said to improve performance through its motivational function (Bandura, 1991b), therefore motivation is a key feature of regulation (Zimmerman, 1986; 2000). From an educational perspective, the study of motivation is central because it relates to engaging 'students in activities that facilitate learning' (Schunk, 2004, p. 329). In the 1970s and 1980s, research on motivation in

learning adopted the socio-cognitive approach (Dweck, 1986), although Weiner (1972) cautioned that motivation should not be treated as a subset of learning theories because the goal of the motivational theorist is to identify the immediate determinants of individual behaviour. Nevertheless, research has shown a distinct relationship between academic motivation and performance levels in students generally, including university students (Archer, 1994; Slavin, 1995; 1996). What is not so clear however, is how motivation and regulation transpires and is sustained in group work learning and activities (Järvelä, Volet & Järvenoja, 2010).

Motivation is a complex and dynamic construct which encompasses numerous cognitive, behavioural and neurological processes. Despite the different perspectives that have evolved over the ages, motivational studies generally examine the causes that initiate and persist in certain goal oriented behaviour (Atkinson, 1964; Dweck, 1986; Bernard et al, 2005). Importantly however, we only know that motivation exists when we observe energised, goal-directed behaviour (Deci and Ryan, 1985), and this persists as the key to unlocking secrets of student motivation and regulation.

The branch of study involving student motivation within the learning environment stems from achievement theory (Atkinson, 1964), with two other forms of motivation, extrinsic and intrinsic motivation[24], providing the main focus of research in this area (Entwistle, 1998). Achievement motivation in general refers to particular types of goals classed as either performance based goals or mastery/learning goals. A performance goal orientation suggests an individual is concerned with being judged on their ability or competence to complete a task. Recent research has identified this competence motivation may be driven by two different types of performance goals: (1) based on an appearance motive, where an individual will seek to gain approval or a favourable judgment on their level of competence; or (2) based on a desire to outperform others (Senko, Hulleman & Harackiewicz, 2011). In contrast to performance goals, the mastery orientation values the process of learning and is defined by a student's quest to develop their skills, to improve their knowledge, demonstrating a desire to learn (Urdan & Mestas, 2006). Further developments in this area of research have resulted in additional distinctions being made

[24] In a nutshell, 'intrinsic motivation is defined as motivation to engage in an activity for its own sake, whereas extrinsic motivation refers to motivation to engage in an activity as a means to an end' (Linnenbrink & Pintrich, 2002, p. 318).

in relation to tendencies of avoidance and approach in both the mastery and performance perspectives (Pintrich, 2000b; Urdan & Mestas, 2006).

For university students, a performance-approach goal based on a desire to outperform is generally correlated with higher grades, whilst there is a positive relationship between the mastery-approach orientation and interest/intrinsic motivation, suggesting that both orientations possess important implications for learning outcomes (Grant & Dweck, 2003; Harackiewicz, Durik, Barron, Linnenbrink-Garcia & Tauer, 2008; Senko et al., 2011), especially as the mastery goal orientation is often not associated with academic achievement (Hulleman, Schrager, Bodmann & Harackiewicz, 2010). Over the years, research has also found both performance-avoidance and mastery-avoidance goals to be associated with negative aspects of learning such as high anxiety, disengagement, and poor performance (Senko et al., 2011).

In an analysis of seven literature reviews that had examined performance/mastery goal research, Senko et al. (2011) found consistent empirical support for only two main criticisms of achievement goal theory: (1) that performance goals undermine/interfere with collaborative learning; and (2) performance goals promote an openness to cheating. Of particular relevance to this research study, is the overwhelming evidence that revealed the competitive, results-oriented approach of performance driven individuals was not conducive to team learning or group performance and in addition might harm 'social relationships and students' sense of belonging' (Senko et al., 2011, p. 37). In contrast, mastery goals appear to be more beneficial for collaborative learning due to the associated link with mastery focused students' desire for social approval and being more open to working and sharing with others (Senko et al., 2011).

Ames and Ames (1984) maintained that the goal structures and value systems associated with student motivation are a product of the environment, therefore this becomes another critical element in the study of collaborative learning and group work. There are two ways of conceptualising motivation within the social learning environment: socially influenced motivation (grounded in the socio-cognitive perspective) and socially constructed motivation (a process-orientation drawn from a socio-cultural/situative perspective) (Järvelä et al., 2010). Järvelä et al. (2010) argue however, that to advance our knowledge and understanding of motivation in collaborative learning, researchers need to move beyond this dichotomy and combine the theoretical and methodological ways of studying individual and social processes. Their proposal is based on the

assumption that ‘in collaborative learning, individual group members represent interdependent self-regulating agents (cognitive angle) who at the same time constitute a social entity that creates affordances and constraints for group and individual engagement (socio-cultural/situative angle)’ (Järvelä et al., 2010, p. 15).

3.3.5 Socio-cultural learning theory

The socio-cultural approach to learning is based on the work of Russian psychologist Lev Semenovich Vygotskiĭ (1896-1934). Vygotsky was a constructivist, who in the tradition of Piaget, promoted active learning. However, unlike Piaget and others who promoted ‘discovery learning’, Vygotsky believed that learning and development was mediated by social, cultural and historical influences. From this beginning, socio-cultural theory is defined as a theory of development, a theory of education, and a theory of cultural transmission (Bruner, 2004) that is based on the concept that ‘human activities take place in cultural contexts, are mediated by language and other symbol systems, and can be best understood when investigated in their historical development’ (John-Steiner & Mahn, 1996, p. 191).

For many in the educational arena, the name Vygotsky is synonymous with ZPD, arguably his most well-known explanation for the value and quality of learning interactions. ZPD relates to ‘the distance between the actual developmental level as determined by independent problem solving, and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers’ (Vygotsky, 1978, p. 86). However, Vygotsky only ever devoted a few pages to this concept (Gredler & Shields, 2007), which only applies to individual learners, does not address the potential of the collective learning process, and suggests that if a group is devoid of more capable peers, the capacity to learn is restricted (Kilgore, 1999). Attempts to address these limitations have created numerous and sometimes conflicting interpretations and applications of Vygotsky’s theory (Bayer, 1996, Wertsch, 2008, Cole, 2009). For this reason much of the educational literature is criticised for its superficial approach to referencing Vygotsky (Gredler & Shields, 2007; Parker, 2008; Smagorinsky, 2009).

Vygotskian scholars believe his theories offer a much deeper and richer perspective when approached in an holistic way (Holzman, 2009; Parker, 2008). To fully appreciate the Vygotskian perspective, educators need to take account of issues of intersubjectivity, the role of cultural and historical factors, and the role of tool-mediated

action (specifically speech and language) within teaching and learning environments (Smagorinsky, 2009), in summary, culture, communication and cognition (Wertsch, 1985). The nature of the interdependence between social and individual processes within socio-cultural theory is established when these three themes are considered together (John-Steiner & Mahn, 1996).

For analytical purposes and to help understand the socio-cultural perspective in relation to collaborative learning, Damsa, Ludvigsen and Andriessen (2013) describe an interrelated tripartite of layers involving individuals, social interaction, and social organisation (the institution). The first layer comprises individuals constructing knowledge and evolving their own understanding and use of concepts in a social context. In the second layer individuals interact with others to co-construct knowledge, and in the third layer the institutional setting provides the conventions, rules and tools that influence how that knowledge is constructed. This closely links to the situative perspective of learning which holds that when individuals work together to produce outcomes, they form part of a system. Grounded in the socio-cultural domain, the situative approach focuses specifically on the characteristics, performance and learning of the activity system, that is 'the collection of people and other systems' (Greeno, 2006, p. 83). Greeno (2006) termed the phrase 'situative' to distinguish his explanation of collaborative learning as involving the simultaneous consideration of individual cognition in relation to the social interaction among participants, and the tools used in the context of an activity. The essence is the interdependence operating between the individual, the group (social entity), and the educational community/university (social context) (Vauras & Volet, 2013).

3.3.6 Socio-cognitive and cultural perspectives in summary

Bandura (2000) summarised the position of the socio-cognitive perspective in relation to group functioning, stating that it rejects a duality of comparisons between group and individuals; individualism and collectivism; or personal versus collective agency. Instead in the 'social cognitive theory of triadic reciprocal causation, personal agency and social structure operate interdependently' (Bandura, 2000, p. 77). In the same way, sociocultural approaches emphasise the interdependence of social and individual processes in the co-construction of knowledge' (John-Steiner & Mahn, 1996, p. 191). Given the multi-faceted and dynamic nature of social learning environments generally and the interdependent nature of interpersonal regulation, those presenting both the socio-cognitive and socio-cultural/situative perspective propose the way to advance the body of knowledge in this

area is to engage in more cross-disciplinary exchange, particularly with the fields of social psychology and group processes and organisational teamwork research (Volet & Summers, 2013). The following section takes up this recommendation and following the key concept identified in the socio-cultural and socio-cognitive literatures, 'interdependence', draws together the collaborative and cooperative learning domains in an exposition of social interdependence theory.

3.4 Social Interdependence Theory

'Social interdependence exists when the outcomes of individuals are affected by each other's actions' (Johnson & Johnson, 1989a, p. 23). This broad definition encompasses all types of interpersonal relationships (Johnson & Johnson, 2013). The idea of social interdependence first emerged in the early 1900's with one of the founders of Gestalt psychology, Kurt Koffka (1935) who made a distinction between sociological groups and psychological groups, suggesting that a sociological group is a 'gestalt'- a unified whole entity, with its own distinctive characteristics. The strength of the gestalt was measured by the degree of interdependence between its members. It was also recognised that there was wide variation in types and amount of interdependence that occurred in different situations (Deutsch, 1949). Koffka's contemporary, Kurt Lewin developed the idea further, suggesting that interdependence was the essence of a group and that 'a group is best defined as *a dynamic whole based on interdependence rather than on similarities*' (Lewin, 1948, p. 184). The gestalt theoretical position of a group being a 'dynamic whole' means 'that a change in one of its parts implies a change of the other parts' (Lewin, 1948, p. 17).

Lewin (1947) also claimed, based on his 'Field theory', that because groups are dynamic and ever changing, any analysis of groups must account for 'the representation of the group and its setting as a 'social field',… that is 'the structure of the group and its ecological setting' (p.200). Reviewing these and other early theorists in the area, Deutsch (1949, p. 149) suggested that interdependence was the basic criterion common to all.

Extending the work of Lewin and Koffka, Deutsch (1949) proposed that individuals will have a sense of belonging to a group to the extent that they are:

1. pursuing promotively interdependent goals;
2. perceive themselves as pursuing promotively interdependent goals; and

3. a cohesive unit, which is a direct function of the strength of goals perecieved to be promotively interdependent and of the degree of pereceived interdependence.

Following Deutsch (1949), Johnson and Johnson (1989a) explained that everything we do is related to others in one of three ways: it helps others; hinders others; or does not impact others at all. From this perspective, human interaction is either cooperative, competitive or individualistic, or a combination of these (Deutsch, 2005). Cooperative and competitive situations are socially interdependent, whilst individualistic efforts mean that social interdependence is absent (Johnson and Johnson, 1989). There is a qualification regarding individualism in this context however, since some cooperative efforts require a division of labour, in which case an individualistic approach could supplement cooperative efforts rather than oppose them (Johnson and Johnson, 1989). Similarly, cooperative and competitive approaches are not diametrically opposed. Competition or disagreements about the best way to achieve a common goal can stimulate creative solutions and if it takes a constructive course can support cooperative interactions and add significant social and personal value (Deutsch, 2005). Therefore 'the basic premise of [social interdependence theory] is that the way in which social interdependence is structured determines how individuals interact within the situation, which, in turn, affects outcomes' (Johnson & Johnson, 1989a, p. 22).

For social interdependence theory, the structure refers to goal structures and the perception of goal interdependence. This is the key difference between the types of interdependence discussed in the previous section and interdependence according to social interdependence theory (SIT).

3.4.1 The theoretical framework of Social Interdependence Theory

Social Interdependence Theory is based on two main types of interdependence: positive interdependence and negative interdependence (Deutsch, 1949). Positive interdependence aligns with a cooperative approach to working with others and is defined as 'the perception that one is linked with others in a way so that one cannot succeed unless they do (and vice versa) and/or that their work benefits one and one's work benefits them' (Johnson & Johnson, 1989a, p. 24). Negative interdependence suggests that interactions are more competitive in nature. By definition this results in the perception that 'one is linked with others in a way so that one cannot succeed if they do' (Johnson & Johnson, 1989a, p. 25). In this process there are winners and losers and therefore your chance of

success is either diminished or heightened depending on the actions of others. To be able to attain your goals, others must fail. If there is no interdependence, individuals perceive their goal attainment is unrelated to others. SIT suggests therefore that the goals to which group members aspire will determine how they interact in any given situation.

Figure 3.3 illustrates the key components of SIT. For both positive and negative interdependence, the goal structure can be presented as three major categories: through the interdependence of means; outcome independence; and boundary interdependence. Means interdependence relates to the reliance on others to provide necessary resources, roles and/or tasks. When there is a positive means relationship, the sharing of resources, roles and tasks can be overlapping and part of an overall strategy to achieve a common goal, as is the case if students divide an assigned task between group members. If the actions of one or more individual/s within the group hinder, interfere, or sabotage the effectiveness of others completing their goals/tasks successfully, then the existent interdependence of the resource means results in a negative experience. Negative means interdependence is also the result of individuals perceiving their situation to have been caused by the performance or lack thereof of others.

There are two types of outcome interdependence: goals and rewards. Positive reward interdependence suggests that group members will be focused on gaining a reward or avoiding the loss of a reward. However the reward-goal dichotomy presents the main theoretical difference that emerged early on between cooperative learning contemporaries, David and Roger Johnson and Robert Slavin. Slavin (1983b) emphasised incentive structures and argued that group rewards and individual accountability were essential to the effectiveness of cooperative learning instructional methods. However, Johnson and Johnson (1989) took a broader view and suggested that for a reward structure to be effective, there needs to be a perception of positive goal interdependence between group members. Both the reward and goal interdependence components of positive outcome interdependence are shown in Figure 3.3.

Johnson and Johnson (2009) note that the way in which other researchers have variously conceptualised interdependence as resource, role, task and/or reward structures (for example as outlined in Figure 3.1) can be subsumed within these three SIT categories of means, outcome, and boundary.

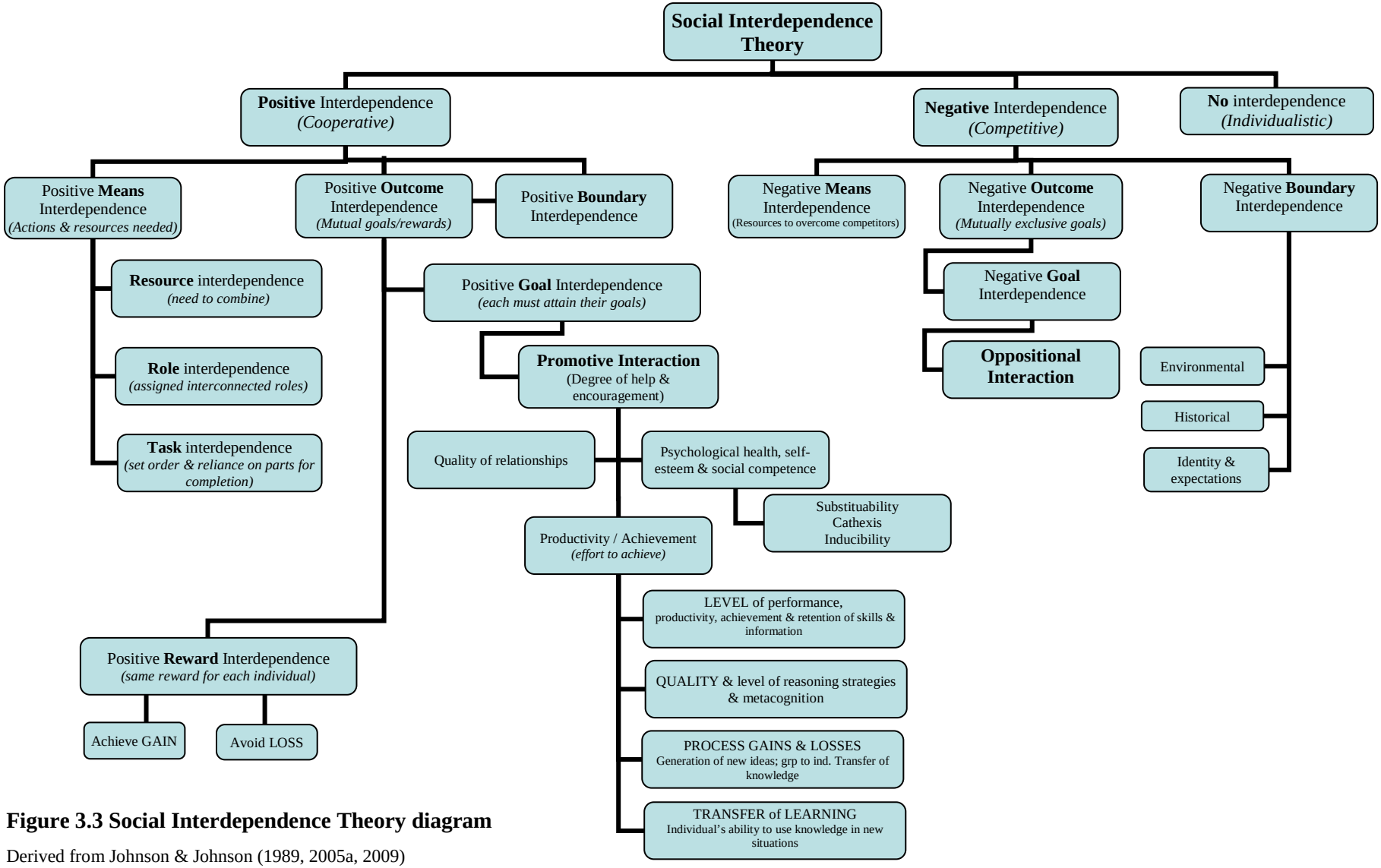


Figure 3.3 Social Interdependence Theory diagram

Derived from Johnson & Johnson (1989, 2005a, 2009)

Having reviewed six decades of research into the social interdependence phenomenon, Johnson and Johnson (2005a) found that positive goal interdependence is the main artery to successful cooperation, higher achievement and greater productivity within the SIT framework, although the combination of both goal and reward interdependence increases that likelihood. The key component however is promotive interaction, which implies mutual assistance, trust, support, and encouragement, in the facilitation of goal accomplishment (Johnson & Johnson, 1989a; 2005a; 2009). Furthermore, it is promotive interaction 'that most powerfully influences efforts to achieve, caring and committed relationships, and psychological adjustment and social competence' (Johnson & Johnson, 1989a, p. 63), as well as 'facilitating the development of new insights and discoveries' rather than merely motivating individuals (Johnson & Johnson, 2005a). Deutsch (1949, p. 138) first hypothesised that:

> Individuals who are exposed to the cooperative social situation will perceive themselves to the more promotively interdependent (in relation to the other individuals composing their group) with respect to goal, locomotions, facilitations, etc., than will individuals who are exposed to the competitive social situation.

Deutsch (1949) went on to outline three psychological consequences shaped by positive interdependence: substitutability (acceptance that there is no need to perform functionally identical actions); positive cathexis (the investment of emotional energy in support of others whose actions are effective); and inducibility (mutual influence), although notably it is argued that without an orientation towards some goal and/or reward outcome, there would be no type of outcome interdependence; and without outcome interdependence there is no cooperation or promotive interaction, or competition for that matter (Johnson & Johnson, 2009).

Oppositional or contrient interaction defined as 'individuals discouraging and obstructing each other's efforts to achieve' (Johnson & Johnson, 1989a, p. 39) is the equivalent element to promotive interaction for negative outcome interdependence. For ease of reference, only the main elements of positive interdependence appear in Figure 3.3; however, for each positive element SIT suggests, there is a corresponding opposite and equal negative component. For example, the productivity and achievement outcomes of both promotive and oppositional interactions rely on the intertwining of various components such as knowledge, skills and level of performance; metacognitive strategies; process gains and losses in the generation of new ideas; and the transfer of learning

(Johnson & Johnson, 1989a). In the same way, the psychological processes of substitutability, cathexis and inductibility, have both positive and negative permutations.

Finally, boundary interdependence refers to external factors that segregate and separate (negative interdependence) or alternatively, unifies (positive interdependence) individuals into groups or sub-groups. These factors can include environmental interdependencies such as campus, tutorial times, or proximity due to seating arrangements; personal characteristics, similarities or differences; past history; or identity and expectations (Johnson & Johnson, 2009). Once again these types of interdependencies are not independent categories but rather intersect and/or combine to form the parameters that present the particular situation in which the group work takes place. The shared space or 'field' (Lewin, 1935) influences how students interact.

To summarise, SIT is based on two key concepts: *perceived* interdependence and the effectiveness of actions. Therefore, what individuals think and what they do when they work together affects their psychological processes and their patterns of interaction (Johnson & Johnson, 2005a). The key feature of this theoretical position is the reciprocal nature of cooperative efforts to achieve psychological health, and positive relationships, as well as increased efforts to perform. Through the lens of social interdependence theory however, cause and effect are bi-directional and therefore the centrality of these social psychological processes means that they can result in positive or negative experiences and ultimately the success or breakdown of cooperative efforts (Johnson & Johnson, 2005a).

3.4.2 Applying social interdependence theory to group learning

'Social interdependence theory provides a foundation on which cooperative learning is built' (Johnson & Johnson, 2009, p. 365). There are numerous alternatives for structuring cooperative learning activities, as mentioned in Chapter 2, and key theorists of cooperative learning have carved a niche in the successful design of cooperative learning models and instructional methods, particularly for schools (Kagan, 1985a; Sharan, 1999; Slavin, 1995). However, Johnson et al. (2013) claim that the success and power of applying social interdependence theory to cooperative learning lies in the close alignment and interrelationship between the theory, extensive validating research, and practice. What is more, contemporary cooperative learning is recognised in various forms: in formal tasks and assignments, completed in one class or over several weeks of a semester; informal temporary or ad hoc discussion groups; and long term base groups, where

heterogenous groups of students work together throughout the duration of a course (Johnson & Johnson, 2016). The following sections highlight how key components of SIT have been applied to these different types of cooperative learning structures to form the essential elements framework for effective cooperation in group learning situations.

3.4.3 The essential elements of cooperation

As demonstrated in research findings (and explored earlier in Chapter 2), group work is not always effective, and in higher education especially, simply telling students to work together in groups is fraught with problems (Herrmann, 2013; Johnson et al., 2007). Furthermore not all group work is cooperative (Gillies, 2014; Johnson & Johnson, 1999; 2009). However, Johnson et al. (2013) argue that wherever there is interaction between individuals there exists the potential for cooperation – what is needed are the right conditions. According to SIT, those conditions include five essential elements:

1. positive interdependence;
2. individual accountability;
3. promotive interaction;
4. social skills; and
5. group processing (Johnson & Johnson, 1989a; 2005a; 2009).

3.4.3.1 Positive interdependence

As discussed earlier and shown in Figure 3.3, the first key element, positive interdependence, is the over-arching perception that the actions of individuals are inevitably linked to the attainment of joint goals. Furthermore, research evidence suggests that perceptions of positive interdependence are more important than simply identifying with group membership or interpersonal interactions within a group (Johnson & Johnson, 2009). Numerous meta-analyses consistently agree that positive interdependence leads to better achievement and productivity outcomes than competitive or individualistic structures (Johnson & Johnson, 1989a; 2005a; Johnson, Maruyama, Johnson, Nelson & Skon, 1981; Kyndt et al., 2013; Roseth, Johnson & Johnson, 2008; Slavin, 1996; Springer, Stanne & Donovan, 1999).

3.4.3.2 Individual accountability

Early theorising suggested that clearly perceived positive interdependence also promoted recognition of a personal responsibility to others and to achieving group goals (Deutsch,

1949; Johnson & Johnson, 1989a; Slavin, 1988), creating feelings of accountability and the need to facilitate the work of fellow group members. Individual accountability was therefore identified as an important second element to cooperation. Interestingly however, Johnson and Johnson (2004, 2005a, 2009, 2015) use a summative structured definition of individual accountability and suggest that it exists 'when the performance of each individual member is assessed and the results are given back to the individual and the group to compare against a standard of performance' (Johnson & Johnson, 2009, p. 368). Furthermore they suggest that free-riding and social loafing are more likely to occur if individual contributions are difficult to measure, which tends to happen as the group size increases and/or if there is no formal identification of individual effort. This separation of terms is deliberate. Johnson and Johnson (2013, p. 106) propose that 'the lack of individual accountability may reduce feelings of personal responsibility'. Slavin (1983b) similarly refers to individual accountability in terms of the quantifiable performance of each group member and suggests that single group based rewards are alone inadequate to motivate all members. This assessable conceptualisation of accountability is synonymous with the cooperative learning literature (Johnson & Johnson, 2004; Mesch, 1991; Slavin, 1995), and extends to the concept of group accountability in which the group is assessed overall. It is argued that the purpose of the cooperative learning group is to work together to make each member stronger and improve the performance of the individual (Johnson & Johnson, 2004), hence the focus on measuring contribution.

3.4.3.3 Promotive interaction

Promotive interaction is the third key element necessary for success in a cooperative environment. It is the direct result of positive goal interdependence and is defined as 'individuals encouraging and facilitating each other's efforts to achieve, complete tasks, and produce in order to reach the group's goals' (Johnson & Johnson, 1989a, p. 63). As illustrated in Figure 3.3, there are two important aspects of promotive interaction: (1) quality relationships, in the form of personal support systems in which positive interpersonal dynamics result, and the academic support system which promotes productivity and performance; and (2) psychological health. Characteristics of promotive interaction include: a willingness to help each other; accepting the ideas of others; sharing of resources; communicating; mutually encouraging and influencing effort; striving for mutual benefit; interpersonal trust; and low anxiety and stress levels (Johnson & Johnson,

1989a; 2009). Personal attraction, cohesion, and emotional bonding, also have a profound effect on promotive interaction (Johnson & Johnson, 2004).

3.4.3.4 Social skills

Skilled teamwork, based on the effective and efficient use of social skills, is the fourth requirement for successful group work outcomes. Social skills refer to group dynamics variables such as effective communication, building and maintaining trust, leadership, decision making, and constructive conflict management. These interpersonal skills represent the social competency outcomes illustrated in Figure 3.2. Whilst social skills are clearly embedded in each of the other compulsory elements of cooperative learning, Johnson and Johnson (2003; 2004; 2009) list them as a separate requirement because they maintain that social skills for small group work must be taught 'just as purposefully and precisely as do academic skills' (Johnson & Johnson, 2004, p. 33).

3.4.3.5 Group processing

The final essential element of cooperative learning is group processing. The key component of group processing is reflection. Johnson and Johnson (2009, p. 369) explain that group processing happens when group members '(a) reflect on which member actions were helpful and unhelpful and (b) make decisions about which actions to continue or change'. The purpose is to monitor and improve the effectiveness of group processes and functioning in pursuit of the group's goals. To this end respect is critical. Respect for fellow group members' contributions, efforts, and feelings during group processing increases self-esteem, commitment, and collective identity (Johnson & Johnson, 2009). Theoretically this element parallels the collective efficacy and collective agency components of social cognitive theory. Johnson and Johnson (2013) argue that the process of *'group processing'* promotes individual self-monitoring and self-efficacy. However, like social skills, group processing is a competency that should be taught within educational institutions utilising group work and cooperative learning activities.

The concept of group processing however warrants further analysis given the potential for confusion with the terms *'processing'* and *'processes'*. Within the SIT framework *'group processing'* is broadly described from a purely reflective position, and appears to differ from the multidimensional nature of *'group processes'* which encompasses a plethora of theoretical models for explaining teamwork interactions. For example, earlier in this chapter at section 3.1.2, the process concept was discussed in

terms of the teaching and learning literature and Bigg's (2003) 3P model (presage, process and product). From the perspective of students' approaches to learning, process was described as the combination of motive and strategy (Duff & McKinstry, 2007). In relation to self-managed learning groups in university, Lizzio and Wilson (2005) identified two main categories of group processes. The first category called 'within-group dynamics' highlighted the way in which social skills are operationalised within a group work framework and included such concepts as equity, workload distribution, conflict resolution, diversity and cohesiveness. The second category, group context, included ecological factors such as task design, rewards, authoritative structures, and environment, which influence how groups are formed and operate. Notably within SIT, category one is presented as social skills, and category two is listed as separate types of interdependence i.e. means and outcome interdependency (see Figure 3.3). However, when conducting a meta-analysis of teamwork processes, LePine, Piccolo, Jackson, Mathieu and Saul (2008) found that the literature has not successfully defined or differentiated between similar concepts, resulting in unclear and broadly defined terms causing confusion.

A comparison of Johnson and Johnson's (1989; 2005a; 2009) definition of group processing with the taxonomy of organisational team processes provided by Marks, Mathieu and Zaccaro (2001) helps to clarify the terms 'group processing' and 'group processes'. Centred on the basic input, process, output model, group (or team) processes are defined as 'members' interdependent acts that convert inputs to outcomes through cognitive, verbal, and behavioural activities directed toward organizing taskwork to achieve collective goals' (Marks et al., 2001, p. 357), in other words it is *how* members work together, the means they utilise, rather than *what* they are doing in relation to the task itself (Marks et al., 2001). A key concept in this definition is that process activities are directed towards the organisation of actions.

Marks et al. (2001) argue that the type of organisation required differs across project time-lines. Therefore different types of processes are performed at different phases of a task. They refer to temporal cycles of goal-directed activity as 'episodes' and describe three types of processes: action processes; transition processes; and interpersonal processes. Action phase processes include coordination and the monitoring of team performance, progress, and systems that occur during episodes of productive work. Transition processes include planning, goal specification and strategy formulation, which

occur between episodes. The third category, interpersonal processes, such as conflict management, motivation and confidence building, occur during and/or between episodes. This notion of time mediated team processes highlights the underlying key concept of all processes, that is, ongoing evaluation. According to Marks et al's (2001) framework it is apparent that at every phase, 'process' refers to some form of planning, monitoring, evaluating, analysing, reviewing, and/or reflecting on the interdependent nature of working together to effectively achieve group/team goals. This is consistent with Johnson and Johnson's (2013, p. 107) definition that 'a process is an identifiable sequence of events taking place over time' and their view that '*group processing*' is 'a form of team reflexivity, the extent to which group members overtly reflect upon and modify their functioning' (p. 109).

3.4.4 Summary of Social Interdependence Theory

Overall, Social Interdependence Theory, as developed originally by Deutsch (1949) and advanced by Johnson and Johnson (1989, 2005a, 2009), is grounded on the actions people undertake to pursue a goal. The appropriate course of action is determined by their perception of goal interdependence, which can be positive, negative or not interdependent at all (Johnson & Johnson, 2005a). However, perceptions and actions can change and are underpinned by psychological processes and patterns of interaction that lead to three key outcomes: effort expelled to achieve the goal; the quality of interpersonal relationships; and psychological health. Within the context of SIT, psychological health is defined as 'the ability to develop, maintain, and appropriately modify interdependent relationships with others to succeed in achieving goals' (Johnson & Johnson, 2013, p. 99).

Social interdependence exists in two forms: in competition and in cooperation. For social learning situations and in particular in relation to group work in educational settings, the aim is to facilitate cooperative learning. According to SIT the key mediating conditions for a successful cooperative experience are positive interdependence, individual accountability, promotive interaction, social skills and group processing.

3.5 A framework to explore group work in accounting

Having reviewed the key theoretical frameworks associated with the study of collaborative and cooperative learning within the educational sector, this next section synthesises the identified key dimensions to present a model for the exploration of group work in accounting education for this research.

3.5.1 The centrality of interdependence

As described earlier, interdependence is the common link between the social learning theories examined in this chapter. From each perspective: socio-cognitive, socio-cultural, and social interdependence theory, the perception of interdependence underpins interpersonal interactions, albeit with different foci. The behavioural/socio-cognitive and the socio-cultural/situative perspectives focus on the interdependence of reward and task interdependence and means, such as resource and role interdependence (respectively). SIT, on the other hand, emphasises outcome/goal interdependence while also recognising the role of means interdependence and contextual boundary interdependencies. This perspective has developed from the cooperative/competitive approach to interdependence and is characterised by reference to promotive and contrient interactions (Deutsch, 1982). However, Deutsch (1982) identified five fundamental dimensions of interdependence of which the cooperation and competition dichotomy was only one. The other key aspects of interdependence included: the power distribution, also referred to as autonomy/control or the basis and mutuality of interdependence (Rusbult & Van Lange, 2003; 2008); task oriented versus social-emotional, which suggests that a distinction can be made based on the personal nature of the interaction; formal versus informal interactions; and finally the intensity or importance given to the interaction. Others suggest that interpersonal relationships differ on two key dimensions: personal/social and voluntary/non-voluntary relations (Jackson-Dwyer, 2014). Despite different approaches to interdependence, Rusbult and Van Lange (2003) explain that the various dimensions together make up the structure of the interdependence situation. The 'situation structure matters because it is the interpersonal reality within which motives are activated, towards which cognition is oriented and around which interaction unfolds' (Rusbult & Van Lange, 2008, p. 2049).

The core assumption is that interdependence is central to understanding and analysing how people live, work, and learn together. This view of interdependence is grounded in social psychology's classification of three main types: cognitive interdependence, behavioural interdependence, and affective interdependence. It is argued that social influence is so pervasive that it affects people's thoughts (cognition), actions (behaviour), and feelings (affect), and in turn people construct a reality that influences others (Smith, Mackie & Claypool, 2014).

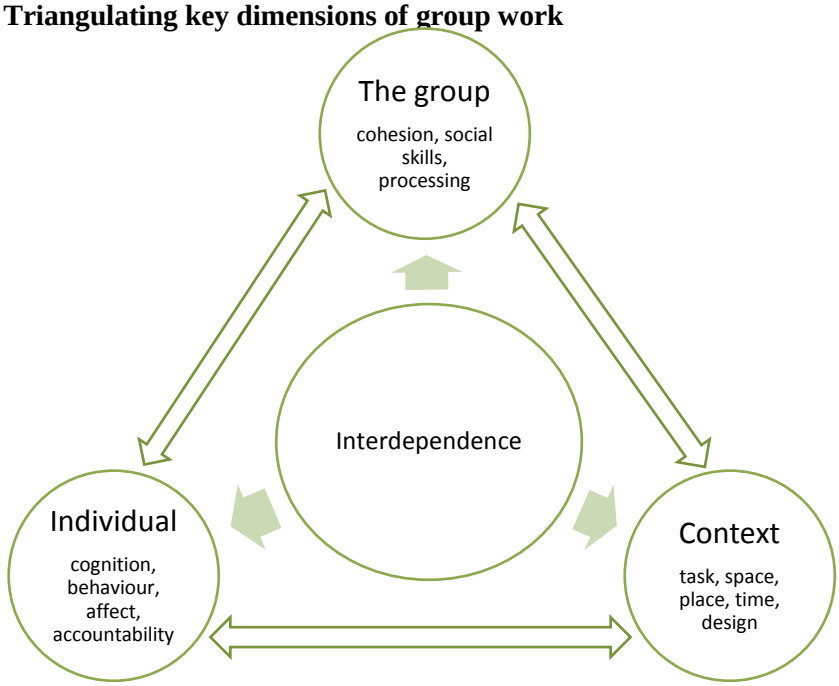
Whatever form it takes, interdependence has consistently been found to significantly impact cooperative and/or collaborative relationships in group learning

situations (De Dreu, 2007; Gully et al., 2002; Johnson et al., 2007), although, in previous accounting education studies, positive interdependence is generally assumed based on descriptive accounts of the implementation of cooperative learning strategies (Ballantine & McCourt Larres, 2009; Clinton & Kohlmeyer, 2005; Cottell, 2010b; Cottell & Millis, 1993). Further, Clinton and Kohlmeyer (2005, p. 98) argue that 'traditional group work does not necessarily depend on interdependence', which is a narrow interpretation of interdependence. Notably, accounting students' perception of interdependence or its importance to group work in accounting has not been studied, presenting an apparent gap between the theorising of interdependence and its measurement from the accounting students' perspective. Whilst it is beyond the scope of this study to analyse all the dimensions of interdependence, as presented above, it is clear that in devising a model for exploring group work in accounting education, 'interdependence' should represent the central theme, as depicted in Figure 3.4.

3.6 Summary

In the opening paragraphs to this chapter, interdependence featured as a key concept in defining groups and differentiating between types of groups. The literature reviewed in the remainder of this chapter cemented the focus on interdependence as the crucial component in the theoretical framework proposed for this study. It highlighted the most

Figure 3.4 Triangulating key dimensions of group work



relevant aspects of research relating to the theorising of group learning and the evolution of theoretical perspectives from educational and social psychology viewpoints in particular. It focused specifically on identifying how these have influenced and shaped scholarly thought in education, and provided the foundation for better understanding how university students in accounting might learn and work together.

From this perspective, the key elements of CL, which are derived from SIT, provide the basis of the theoretical foundation to examine Research Questions 2-5. These aspects, individual accountability, promotive interaction, social skills, and group processing, represent the individual and group dimensions to be explored, together with Research Question 1, which addresses the contextual dimensions of group work, as presented in Figure 3.4 (in section 3.5.1). All aspects are anchored around the central concept of interdependence.

Having reviewed the context, from the perspective of accounting education in Chapter 2, and presented the theoretical framework and a model of the triangulating key dimensions of group work in this chapter, the following chapter will provide the research methodology used to answer the key research questions posed:

Research Question 1:
To what extent and in what ways is group work used in Australian university accounting schools?

Research Question 2:
How do accounting academics perceive group work within the accounting curriculum?

Research Question 3:
What does group work mean for accounting students at university?

Research Question 4:
What are the factors that contribute to student and staff conceptions of group work in accounting?

Research Question 5:
How is the theoretical concept of interdependence manifested in group work within accounting education in universities?

Chapter 4: Research methodology

4.0 Introduction

This study is based on a mixed methods research design and incorporates a complex array of research methodologies to appropriately answer the research questions posed. An empirical phenomenographic framework underpins this design. It is characterised by the theoretical and methodological assumptions of phenomenography, namely, the description and analysis of experience, awareness, and variation in conceptions about group work (the phenomenon being studied) (Marton, 1994; Svensson, 1997). Embracing the explorative nature of a phenomenographic orientation (Svensson, 1997), this study utilises a two-stage design and incorporates complementary methodologies. Teddlie and Tashakkori (2010, p. 8) refer to this type of multi-dimensional mixed methods research (MMR) as 'methodological eclecticism'. Far from being a simple combination of quantitative and qualitative methods to counteract apparent weaknesses in one method or the other, MMR's methodological eclecticism is defined as 'selecting and then synergistically integrating the most appropriate techniques from a myriad of qualitative, quantitative, and mixed methods, to more thoroughly investigate a phenomenon of interest' (Teddlie & Tashakkori, 2010, p. 8). Therefore, when utilising MMR, the multifaceted and often complicated arrangement of methods used means that full and accurate disclosure of the research methods employed is vital, to facilitate proper peer review, subsequent replication, and to better support the building of knowledge in this area. To that end, the research methodology used in this thesis will span two chapters.

This chapter describes the two-stage research design utilised in this study and explains each component of the mixed methods approach undertaken. It begins with an overview of the design of the research process. The second section will provide the justification and frame the components of stage one, followed in section three, by a comprehensive catalogue of the integrative mixed sampling scheme that underpins the entire study. The sample selection process for each of the five participant groups will be discussed. Section four will focus on the stage one data collection methods and discuss the design of the survey instrument for academics. It will include an explanation of the format for the academic semi-structured interviews, and precede a detailed description of the analysis process for the data collected from academics. Finally, section five will summarise the key aspects of this chapter.

The following chapter (Chapter 5) will concentrate on the student investigations, in particular the compilation, testing, administration, and analysis of the quantitative student survey and the qualitative phenomenographic approach (Bowden & Green, 2005; Marton, 1981; 1994) used to explore students' experiences of group work and what it means to them in the context of their university accounting studies.

4.1 Research design

The research design employed a two-phase approach as portrayed in Figure 4.1. Stage one focused on defining the research problem using various explanatory and exploratory research techniques, while stage two was dedicated to developing an appropriate model to investigate the research problem in more depth. A multiple case-study design emerged from the stage one analysis, and subsequently accounting students at three different Australian universities were interviewed using a phenomenographic framework (Bowden & Green, 2005; Marton, 1994).

Applying the criteria commonly used in MMR typologies (Creswell & Plano-Clark, 2011; Teddlie & Tashakkori, 2006; 2010), the combination of research design elements in the current study comprised:

- a mix of methodological approaches (QUAN and QUAL)[25]; in
- a multi-strand (phase),
- sequential,
- explanatory (QUAN→QUAL) and exploratory (QUAL→QUAN) design, with
- a complementarity, development, and expansion function, and
- a priority in methods, expressed in the form: quan→QUAL.

The sequential mixed design approach enables confirmatory and exploratory questions to be answered in a pre-specified order (Teddlie & Tashakkori, 2006). The sequential explanatory design, where quantitative data is collected in the first phase followed by qualitative data in the second, explains the overall integration of the delineated phases of the study. This design aspect also allows for issues raised in the literature to be addressed first, before a deeper and more exploratory contribution follows in phase two (Teddlie & Tashakkori, 2006).

[25] Notations: QUAL = qualitative, QUAN = quantitative… "→" = sequential, capital letters denote high priority, and lower case denote lower priority (Onwuegbuzie & Collins, 2007).

Figure 4.1 The research design

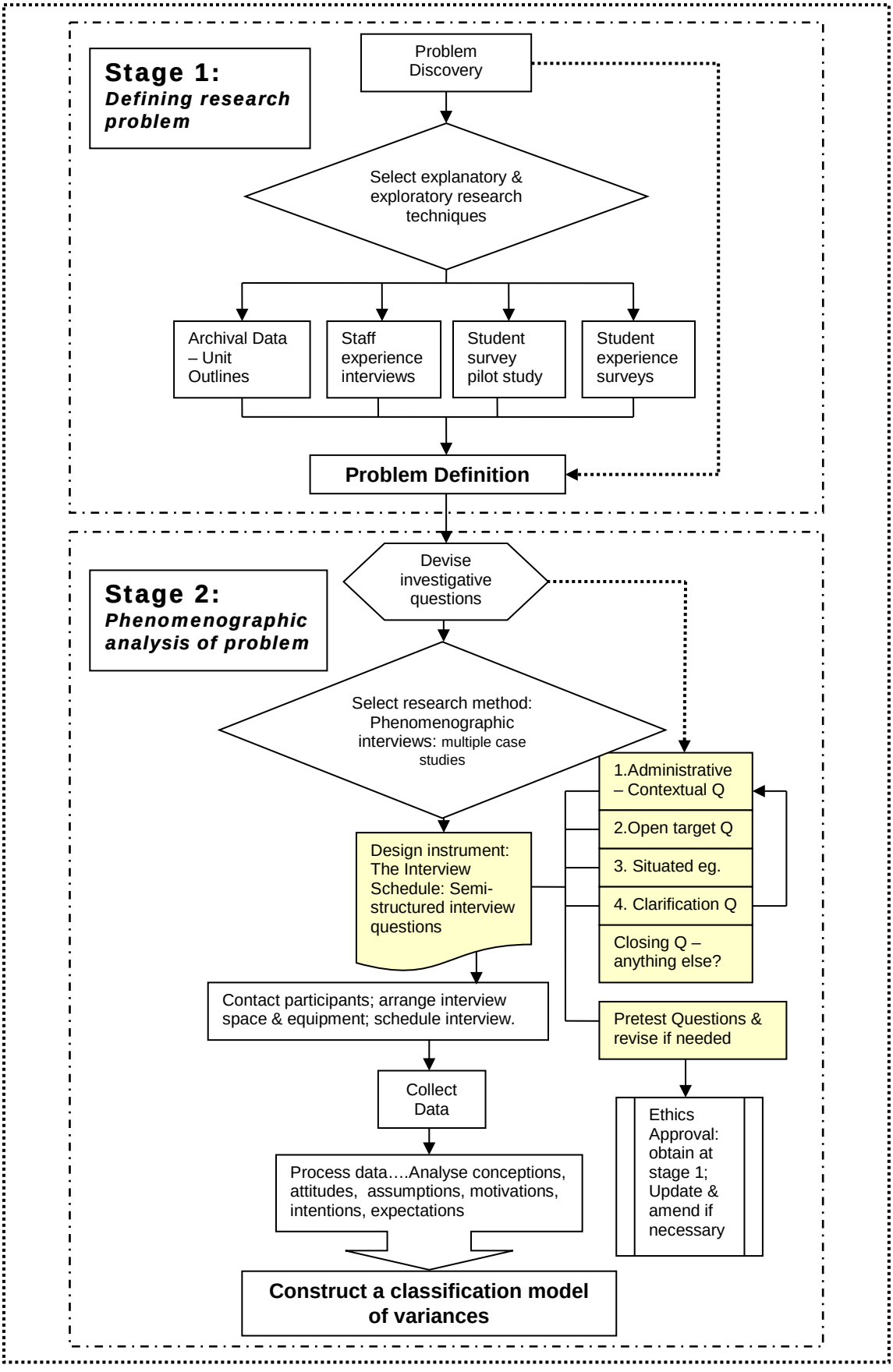


Figure 4.1: adapted from Zikmund (2003) exhibit 4.4 and Cooper & Schindler (2003) exhibit 10-12; 11-1; 11-2

Chapter 2 highlighted that many of the issues relating to group work and the development of interpersonal and team skills, particularly within accounting education, have previously been poorly defined. In an attempt to begin to unpack some of the associated complexity surrounding group work in accounting education, initial explanations of the current situation in some Australian universities were confirmed through an archival search of unit outlines. Conducting explanatory quantitative surveys of students aimed to better understand the nature of the problems with group work, and ultimately refine the research problem for the study. Stage one also included exploratory research undertaken through semi-structured interviews with academics (Cavana, Sekaran & Delahaye, 2001; Zikmund, 2003). Together with the preliminary pilot study, the student surveys provided the third and fourth data sources to help frame the approach to explore the research problem in stage two. These will be discussed in greater depth in the following chapter.

4.2 Stage One: Defining the research problem

In helping to define the research problem, stage one fulfils a three-fold purpose:

1. to examine the extent and ways in which group work is being used in accounting education in Australia;
2. to test assertions espoused in the literature; and,
3. to determine the sample and focus for the stage two in-depth analysis.

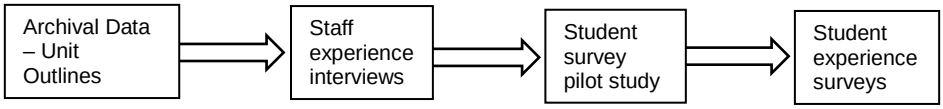
A mixed methods evaluation of these key aims advocates that each have a specific function/s (Greene, Caracelli & Graham, 1989). These functions include (in combination): a complementarity[26] purpose; a development purpose; and an expansion purpose. In this case, the archival data contained in unit outlines, telephone interviews of academics, and surveys of students, provide complementary information gathered from different perspectives. For development purposes, the results of one method (for example, the archival search of unit outlines) are used to help inform the development of the other (eg. the semi-structured interview of academics). Onwuegbuzie and Collins (2007) recommend sequential designs for complementarity, development, and expansion purposes. This differs from triangulation which seeks convergence from *simultaneous*,

[26] Complementarity relates to studies that use quantitative and qualitative methods 'to measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon' (Greene et al., 1989, p. 256).

independent sources (Greene et al., 1989). Onwuegbuzie and Collins (2007) argue that, since triangulated sources must be independent, triangulation is not appropriate in the design of sequential studies. Further, in an empirical examination of mixed method studies, Greene et al. (1989) found that the term 'triangulation' is commonly misused and confused with the reality of a 'complementarity' purpose.

In the following sections, details about the sequential sampling design, and the collection and use of data from archival sources, pilot studies, academic staff interviews, and student surveys (see Figure 4.2), will demonstrate how the stage one components provide a sound base and perform vital functions, individually and in combination, to better define the research problem and ultimately support the robustness of the inferences made in the results of this study. Given the sequential design of this study, the remainder of this chapter will be structured to mirror the unfolding and emerging nature of the sampling, data collection, and analytical strategies employed.

Figure 4.2 Mixed methods sequence for stage one



4.3 Data collection Part 1: Unit outlines

To address Research Question 1, preliminary data, about the extent to which group work was being used in Australian accounting programs, was collected from unit/course/subject outlines[27]. Governed by time and resource restrictions, a convenience sampling method was used at this stage to utilise the publically available information regarding the specific content of accounting unit/subjects at Australian universities. This convenience approach was also purposefully chosen, given the likelihood that schools that upload all unit outlines in the public arena would notionally also support scrutiny of these as part of a research project.

As noted earlier, accounting is offered at each of Australia's 39 universities; however in 2009, a search of all institutions' websites found only seven accounting

[27] Variously described as unit outlines, course outlines, course specifications, or subject outlines, this study will use the common term 'unit outline' when referring to this type of documentation. Notably, a unit refers to one subject (eg. Auditing) that combines with other units within a discipline (eg. Accounting) to form a 'major', 'specialisation', 'program', or 'course' of study.

schools had their unit outline information publicly available online. An additional four accounting schools provided limited information in their online schedules/handbooks about the types of assessment used, including group work. In line with the minimal risk ethics application for this project, and subsequent approval by the Social Sciences Human Research Ethics Committee, emails were sent to the Heads of School/Department at the seven accounting schools who made their unit outlines freely available via their respective institutions' website (see Appendix 3). Despite information being publically available, permission was sought to use that archival information for the purpose of this study. The email invited accounting school/departments to participate in the initial stage of the study by providing copies and/or permission to access the unit outlines for all subjects in their undergraduate accounting major. Permission was received from all respondents. One university indicated in their response that they did not wish to participate beyond the unit outlines.

For the purposes of this study one additional university was approached and included as a control institution to represent the 'non-disclosers' (those without public access to specific unit outline information). In total, eight universities represented the sampling boundary established for this study.

The unit outlines were analysed using content analysis. As noted by Neuman (2004), content analysis can take the form of a quantitative or qualitative interpretivist inquiry. On this occasion the emphasis is simply to quantify the existence of text relating to group work, and to gauge any potential themes, or areas of concerns that may help to better define the problem. To this end, the relevant data units, specific to content analysis, include the unit of analysis (unit outlines); the context unit (accounting subjects); and the syntactical recording unit ('group work' or 'team work') (Cooper & Schindler, 2003; Neuman, 2004). Content analysis further requires that the recording units are measured according to a coding scheme and classified into categories. The classification scheme used in this study comprises six variables/categories:

1. Knowledge area/subject
2. Year level
3. Type of group work
4. Weighting (for assessable items)
5. Graduate attribute reference
6. Number of accounting units using group work at each university.

The manifest coding scheme focused on recording the frequency and attributes of the category variables, within the parameters of the decision rules listed in Appendix 2. For the purposes of this study, the following types of units were explicitly excluded from analysis:

- CSCL (i.e. Distance units) – *except* for common use of commercial Learning Management Systems (LMS) eg. Blackboard/Moodle
- Summer/Spring school units (except for trimester units)
- Voluntary student study groups or peer assisted learning groups
- Elective units (only compulsory accounting units were included)
- Honours units; MPA & other postgraduate courses (only undergraduate).

4.3.1 Limitations of unit outline information

The autonomous nature of universities and the varying degrees of academic freedom afforded to academics (Christensen, 2011; Shore & Taitz, 2012) generates a myriad of different types of unit outlines and the information contained within them. The amount of detail included can vary greatly and the information contained in unit outlines may not accurately reflect the reality of what is delivered. This presents a possible limitation to the reliability of the content analysis. It is also apparent that the format and content of unit outlines may change from year to year, semester to semester, unit to unit, and academic to academic, although increasingly there is a trend towards standardisation of formats. Nevertheless, given these limitations, the unit outline information is the most appropriate starting point to examine the extent and ways in which group work is part of the accounting education context. They do provide useful information for identifying a sample population for stage one of this study.

4.4 Sample selection

Following the content analysis of the unit outlines, six of the total eight universities contacted kindly granted permission for their staff (and students) to take part in the survey and interview stages of this study. The multistage purposive sample selection included choosing five sub-groups of participants based on specific criteria. Table 4.1 presents an overview of the mixed sampling strategy described in the following sections. It outlines the composition and characteristics of the emerging participant groups, as well as the main sampling schemes employed.

Table 4.1 Participant groups and main sampling schemes employed

Group	Participants	Institutions	Sampling scheme[1]	Characteristics
Group 1	Unit coordinators (UC)	6 Australian universities	Criterion Opportunistic Confirming	UC undergraduate unit (accounting major) Unit outline refers to group work Sub-sample of group 1
Group 2	Sub-sample UC – Case studies	3 Australian universities	Multi-stage purposeful Criterion Maximum variation Quota	Willingness to participate in stage 2 Geographical & institutional diversity Unit matches case study criteria Only 1 unit per type of group work
Group 3	Other teaching staff	3 Australian universities	Multi-stage purposeful Criterion	Sub-sample of group 2
Group 4	Students	3 Australian universities	Multi-stage purposeful Criterion Convenience	Sub-sample of group 2 Attending the lecture/s in which survey is administered
Group 5	Sub-sample Students – Case studies	3 Australian universities	Multi-stage purposeful Criterion Maximum variation Quota	Sub-sample of group 4 Willingness to participate in stage 2 Demographic diversity 6-10 students per university

[1]Sampling scheme typology based on Onwuegbuzie and Collins (2007)

4.4.1 Group 1: Unit coordinators

Group 1 included the academic unit coordinators[28] of accounting undergraduate units (from the six Australian universities agreeing to participate in this study). Their respective units were identified and categorised in the unit outline analysis, described in the previous section. Since all participating institutions held the same accounting profession accreditation, these units were assumed to have met similar requirements in terms of learning outcomes, standards, and content.

A total of 32 unit coordinators were identified as using group work in their units, and emailed an invitation to participate in a telephone interview about their perceptions and experiences of group work in teaching accounting (see Appendix 5). The sampling criterion was initially based on those assigned responsibility as unit coordinators according to the 2009 unit outline analysis. However, it was necessary to employ an opportunistic approach to sampling unit coordinators 'to capitalise on developing events occurring during data collection' (Collins, 2010, p. 359). This was due mainly to the transfer of academics (to different units, institutions, or responsibilities) in 2010/2011,

[28] Unit coordinators are the academic staff responsible for the innovation, development, brokering, delivery, and monitoring units of study (Vilkinas, 2009). Vilkinas (2009) defines academic unit coordinators as 'the university's 'front-line' managers (p.xi).

and the confirmation that at least three other unit coordinators at Uni A used non-assessed group work tasks in classes. However, unlike other universities (for example Uni C, G & H), these non-assessed aspects of the unit were not included in the unit outline. This type of confirming/disconfirming sampling scheme is consistently used in mixed methods sampling designs (Onwuegbuzie & Collins, 2007).

As shown in Table 4.2, four emails were returned immediately with 'out of office' replies indicating the staff member was on extended leave, and one had left the country permanently. Of the remaining 27 potential respondents, two declined the invitation and ten did not respond, providing a sample of 16 unit coordinators and a response rate of 59%. All 16 unit coordinators subsequently completed semi-structured interviews with the investigator, either in person or by telephone. The details of the data collection phase are discussed further in section 4.5.

Table 4.2 Academic respondents

University	Number of academics invited to participate	Emails returned	Number of potential respondents	Accepted invitation	Declined invitation	No response	Participation percentage at each institution
Unit Coordinators							
Uni A	4		4	4			100%
Uni B	6	1	5	3	1	1	60%
Uni C	6	2	4	3	1		75%
Uni D	3		3	1		2	33%
Uni E[1]	UDNP		0				
Uni F[2]	UDNP		0				
Uni G	10	2	8	4		4	50%
Uni H	3		3	1		2	33%
Sub Total	**32**	**5**	**27**	**16**	**2**	**9**	**59%**
Other teaching staff							
Uni A	1		1	1			100%
Uni B	0						
Uni C	7		7	5	1	1	71%
Uni H	1		1	1			100%
Sub Total	**9**		**9**	**7**	**1**	**1**	**78%**
TOTAL	**41**	**5**	**36**	**23**	**3**	**10**	**64%**

UDNP = University did not participate
[1]The University declined to participate in the full study
[2]The University did not respond

4.4.2 Group 2: Case studies

At the end of each of the initial interviews with the academic unit coordinators, and consistent with the multi-stage purposeful approach employed, group 1 participants were asked to indicate their willingness to participate further in the case study phase (stage 2). Only two participants declined, leaving 14 units (88% of group 1), and all six universities, providing the sub-sample population from which to choose the case study participants.

Guided by the research questions and the ensuing decision to employ a phenomenographic case study design in stage two, the strategy to select the key informants for the case studies required a criterion based sampling scheme. Since 'phenomenography aims to maximise the variation in ways of seeing, and the choice of characteristics of the participants is driven by that goal' (Green, 2005, p. 35), a maximum variation sampling strategy was used. Furthermore, Patton (2002) explains that a diverse sample yields two kinds of findings: '(1) high-quality, detailed descriptions of each case, which are useful for documenting uniqueness, and (2) important shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity' (p. 235). Both aspects are important to a qualitative inquiry.

To supplement the maximum variation strategy, Collins (2010) suggests conducting a cross-case analysis from multiple case sampling. Arguably, multiple cases are the 'best resource for advancing theories about the way the world works' (Miles & Huberman, 1994, p. 207).

Therefore, informed by the literature[29], the emerging data collected from the unit outlines, and all unit coordinators interviewed in group 1, it was decided to incorporate multiple case sampling using three case studies. The first criterion by which case study participants were selected was based on the type of group work being used within a unit. To be eligible, the accounting unit, and therefore the unit coordinator and their respective student cohort and teaching staff, needed to fit into one of the following three options:

- CS1: Informal (semester-long) study/discussion group (no assessed group work)
- CS2: Structured (semester-long) group project (assessed);
- CS3: Short term (≈4 weeks) assignment based group (assessed);

[29] Onwuegbuzie and Collins (2007) recommend a minimum number of 3-5 case studies when using a sub-group/nested sampling design.

Each unit associated with the 14 coordinators, who voluntarily offered to participate further in this study, was able to be assigned to at least one of the aforementioned criteria. The demographic characteristics, together with additional unit outline information gathered earlier for each unit, were then analysed for diversity. The final selection criteria for case study participants were based on: the type of group work used; subject area; class size; staff numbers; as well as the nature of the institution, the function of group work within the institution's accounting major, and the distance between geographical locations. Patton (2002) explains that using geographically dispersed samples can help to maximise variation in small samples. Where samples are geographically diverse, he argues that the investigator can describe the uniqueness of each site, but also draw out common themes across sites. 'Themes take on added importance precisely because they emerge out of a great variation' (Patton, 2002, p.235). Table 4.3 lists the final combination of characteristics determined by a criterion-based, maximum variation, multiple-case sampling scheme.

4.4.2.1 Benefits and challenges of a multi-case design

The sequential, multi-phase and multi-case sampling design provides for: more meaningful understanding and explanation of the phenomenon under investigation (Miles & Huberman, 1994); increased confidence in the interpretation of findings (Collins, 2010); greater flexibility in its multifaceted nature; and a suitable overall framework for an extended complex study (Creswell & Plano-Clark, 2011). However, the strengths of this design double as the key challenges as well. The potential risk of being overwhelmed with data and/or superficially analysing earlier stages will be addressed later in the data collection and analysis sections of this chapter. Specifically in relation to issues of

Table 4.3 Characteristics of case study units

Group work	**Case Study 1 (CS1)**	**Case Study 2 (CS2)**	**Case Study 3 (CS3)**
Type	Informal	Short term	Structured
Basis	Study/discussion	Assignment	Group project
Time	Semester (10-13wks)	4 weeks	Semester (10-13wks)
Function within course	Lowest % units with assessed group work No group work LOs	Highest % units with assessed group work Group work LO	High % units with assessed group work No group work LOs
Unit demographics			
Subject	Taxation	Management accounting	Financial accounting
Class size	Medium	Small	Large
Staff	2 (Cross-campus)	1	8
Institution	Regional	Private	Metropolitan
Location	South	North	West

sampling, the resources and time needed to implement multiple phases, present the greatest challenge. Creswell and Plano-Clark (2011) note that participant attrition is one such risk associated with the longitudinal aspect of a multiphase design.

In the current study two participants had to withdraw, after the selection of case studies, and just prior to the data collection phase. Both participants gave consent to use their interview data, however their withdrawal from the case study stage had a direct impact on the final criteria used for the case study selections. The first attempt to secure multiple diverse cases included (in addition to those listed above), selecting one unit from each year level: first, second and third year units. However, when the 1st year coordinator withdrew from the study, and the 2nd year coordinator was on study leave during the collection period (and therefore not able to participate), the case study selection process and criteria had to be revisited. From the original nested sample there remained 12 willing participants from which to choose. By sacrificing only one of the original diversity criterion (year level), and selecting all 3rd year units for each case study participants, the robustness of the sampling scheme was not compromised. In fact, results will show this to be a fortuitous change, since 3rd year students are able to draw upon a greater extent and depth of experience. It emerged that variation and diversity were increased due to 3rd year students' extended exposure to group work experiences.

4.4.3 Group 3: Other teaching staff

In addition to unit coordinators, other significant teaching staff were invited to participate, given their respective roles and influence on the student experience in units. After selecting the three case study units, each of the respective unit coordinators was asked to provide a list of all other teaching staff in their unit[30]. The perceptions and experiences of tutoring staff provide invaluable insights since they are often the first and only direct contact most students have with academics (Percy et al., 2008). In addition, Keddie and Trotter (1998) argue that tutorial participation in group work activities, group discussions, and presentations, provide the opportunity for developing and practising the teamwork skills so valued by employers. It is the tutors therefore, who are at the 'coal-face' of teaching and facilitating learning in this context. Notably, it is also the tutors who are likely to be the least experienced staff members (Biggs & Tang, 2011), and include a high

[30] Offshore campuses or twinning programs were not part of this study.

number of casual or part-time teachers with little or no opportunity for career development (Anderson, 2007; Harvey, 2017).

In case study 1, additional staff included only one other staff member, the lecturer/tutor teaching at another campus (who was not the unit coordinator). Case study 2 was not represented in this group. Given the size of the cohort, the unit coordinator was the sole staff member. Case study 3 was the largest unit being investigated, and therefore had an additional seven tutors teaching into the unit. Since the perspectives of other staff formed part of the stage 1 preliminary analysis, the head tutor responsible for all accounting units at one institution (identified earlier as the control institution), was also interviewed to complement the views of the other teaching staff engaged in the case study units. This sampling process was purposive and criterion based.

As shown earlier in Table 4.2, a total of nine other teaching staff were invited to participate in this study. Seven accepted the invitation, one declined, and one did not respond, resulting in a response rate of 78%.

4.4.4 Group 4: Student cohorts for the in-class survey

The group 4 participants are the student cohorts that emerged through the selection of the group 2 case study sites. The multistage purposeful sampling of students relied on convenience sampling for stage one of the project. To alleviate the potential burden of poor response rates with online surveys, as experienced in the pilot study (refer to section 5.2 in the following chapter), the stage one student sample comprised those students, who attended either of the two lectures[31] at the time the survey was administered and conveniently agreed to participate. The in-class survey information sheet handed to students and the PowerPoint slides presented in class, can be found at Appendix 7.

4.4.5 Group 5: Student participants for stage two interviews

Participants for the stage two phenomenographic interviews were a sub-sample of the group 4 student cohorts. Selection was based on students who indicated their willingness to participate further in the interview stage. A separate sheet was handed to students to complete at the end of the survey (see Appendix 10). The aim of the phenomenographic

[31] At all 3 universities repeat lectures were delivered each week, although for different reasons. For Uni A it was delivered at a different campus; Uni B had an afternoon and evening 3 hour seminar structure; and Uni C ran a repeat lecture the following day to accommodate large numbers.

approach undertaken in this study was to select for variation. Therefore students were selected for interview using an opportunistic sampling framework, where the researcher makes selections based 'on specific characteristics to capitalise on developing events occurring during data collection' (Onwuegbuzie & Collins, 2007, p. 286). To ensure maximum variation, the diversity criteria were adjusted slightly to cater for the different cohort characteristics at each research site, and the availability of students to meet their respective scheduled appointment times. However, the key variables around which selection ultimately revolved were age, gender, ethnicity, language, work and family commitments, and enrolment status (full time or part-time). Academic performance was not used as a specific selection criterion, due to potential subjectivity in the measures used across institutions, although indirectly the demographic variables chosen ensured a wide cross section of academic achievement.

4.4.6 Sample size

In formulating sampling decisions, sample size is important to consider. An inadequate sample size limits the potential to achieve generalisability for the quantitative instruments, and saturation in the qualitative phase (Collins, 2010). However in mixed methods research, issues of size are not always about a greater number, especially as the chosen sampling scheme for this study is based entirely on non-probabilistic, purposive sampling, which will influence sample size. In fact, Collins (2010, p. 361) warns that 'the depth of data collection using a case-oriented approach might be jeopardized if the sample size is too large'. Creswell and Plano-Clark (2011) also explain that there are different moderating factors that need to be taken into account, such as the type of qualitative approach being used, and sampling strategy employed. Overall, decisions about sample size must also take into account the cost-benefit analysis (Cavana et al., 2001; de Vaus, 2002).

Nevertheless, Table 4.4 shows that careful management of the size parameters successfully achieved recommended benchmark minimums for MMR. Sample size is more sensitive in the quantitative phases of the study and subject to the power of statistical inferences (Cohen, 1992). Therefore, sample size for the quantitative analyses will be addressed more fully in the respective discussion of results.

Table 4.4 Participant groups and sample size

Group	Participants	Sample size	Recommended size	Authority
Group 1	Unit coordinators	16 (6 universities)	Between 6 & 12	Onwuegbuzie & Collins (2007)
Group 2	Case studies	3 (3 universities)	Between 3 & 5	Onwuegbuzie & Collins (2007)
Group 3	Other teaching staff	7 (3 universities)	Between 6 & 12	Onwuegbuzie & Collins (2007)
Group 4	Students (survey)	249 (3 universities)	>30 *N* is a function of α, *ES*, *power*	Cavana et al. (2001); Cohen (1992) de Vaus (2002)
Group 5	Students (interviewees)	29 (3 universities)	Between 4 & 10 participants per case study	Creswell and Plano-Clark (2011) Onwuegbuzie & Collins (2007)

4.4.7 Summary of the mixed sampling strategy

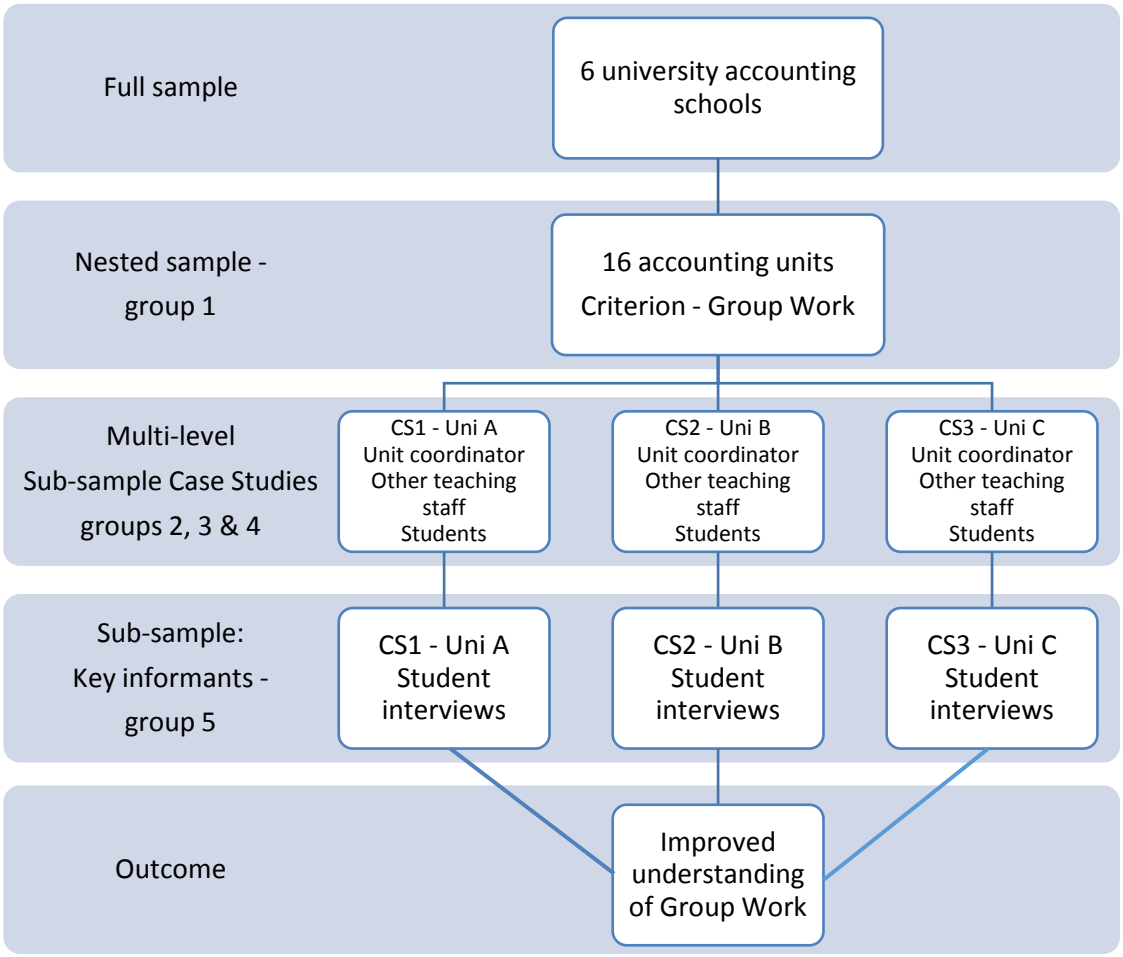
To summarise, the combination of sampling schemes used incorporates a two-dimensional mixed methods sampling model (Onwuegbuzie & Collins, 2007). Figure 4.3 illustrates the integrative nature of this design. Notably, the relationship between the various groups, and methods used, straddles two design features described by Onwuegbuzie and Collins (2007): nested samples and multi-level samples. The nested sample design specifies that participants in one phase are a purposefully chosen subset of participants in the other stage (Collins, 2010). This type of mixed method sampling design is routinely used in educational research (Teddlie & Yu, 2007; Yin, 2006).

4.5 Data collection Part 2: Academics

As part of the stage one data collection phase, a total of 23 accounting academics, out of the 37 that were approached (a response rate of 62%), participated in semi-structured interviews. This sample size is consistent with other studies that have conducted interviews with Australian academics (Fraser & Bosanquet, 2006; Gregory & Jones, 2009; Leveson, 2004). Fraser and Bosanquet (2006) conducted interviews with 25 academics about their conceptions of 'curriculum'; Gregory and Jones (2009) investigated approaches to teaching with 25 Management lecturers at five different universities in Melbourne; while approaches to teaching and student learning in the accounting discipline was the subject of Leveson's (2004) interviews with 24 academics at seven different Australian universities. The current sample included 16 unit coordinators, and seven other teaching staff, sourced from six Australian universities.

Academics were asked a series of questions about their perceptions and experiences of group work within accounting education. Questioning took the form of

Figure 4.3 Multi-level nested sampling design



Adapted from Onwuegbuzie and Leech (2007, p. 247)

semi-structured interviews, conducted via the telephone and face-to-face, and these were recorded and transcribed verbatim. The following sections describe the survey instrument and interview process used for questioning, and explores the strengths and weaknesses of the multi-mode method of administration employed.

4.5.1 The academic survey and interview process

The overall mixed method design of this study incorporated the mixing of methods in the academic interview process as well. The survey questions included both qualitative open-ended questions and quantitative rating scale questions. Normally, questions presented on a rating scale would be considered closed-ended questions (de Vaus, 2002), and asked in a standardised format interview with no probing or allowing respondents to deviate far from the standard responses (Neuman, 2012). However, when posed as part of a semi-structured interview, respondents have the opportunity to further elaborate or explain their

answer, in an open and unencumbered way. This mixed element to the questioning style was one of the key strengths in the way the academic survey was administered.

Academics who had responded to the email invitation to be interviewed were contacted individually to arrange a mutually convenient time to conduct the interview. The interview schedule is provided in Appendix 9. Interviewing followed the format of the approved survey instrument[32]. This was divided into the following three parts.

Part A included general questions about academic's perceptions and experiences of group work. Accounting academics were first offered the opportunity to share their perceptions and experiences of group work by responding to five open ended questions designed to elicit their initial reactions and responses. In line with in-depth interview procedures, additional probing questions were asked by the interviewer, and the academics were encouraged to explore areas of group work that meant the most to them, whether that was through positive or negative experiences, and to justify their responses.

In addition, the general questions about group work in part A also comprised 5 Likert scale questions, where academics were asked to indicate their responses to multiple items that had been grouped together to form rough scales. These included:

- question 6: how strongly they agreed or disagreed with 10 statements about workload, student engagement, and curriculum matters (based on a 7 point Likert scale from very strongly disagree to very strongly agree);
- question 8: included 10 items related to the frequency and way in which group work is used in their teaching activities (rated on a 5 point Likert scale from 'never' to 'always';
- question 9: focused on 13 statements about group processes (using the 7 point agree/disagree rating options); and
- question 10: proposed five motivations for using group work activities and asked academics to rate the importance of each item (based on a 5 point Likert scale from 'not important at all' to 'very important').

Question 7 was a single item question asking participants to indicate the extent to which they use group work in their teaching. This was measured on a 5 point scale from 'never' to 'always'.

[32] See Appendix 11.1

The use of multiple indicators in scales is justified because they help the investigator to: better understand a complex phenomenon; develop more valid measures; increase reliability; analyse with greater precision; and simplify the analysis (de Vaus, 2002). Notably, as indicated earlier in Chapter 2, a search of the literature failed to find any other study of academics' perceptions and experiences of group work (other than as an element of the generic skills literature). Therefore this first attempt at constructing scales and selecting the items that best measure the different aspects of group work, from the perspective of university accounting academics, is exploratory.

Part B, in the survey of academics, required the participants to recall a specific instance when they had used group work in their teaching of accounting, and to respond to a series of questions about how that was operationalised. One question included a list of 14 factors that might influence their choice to use group work activities in accounting (de la Harpe et al., 2009). For each factor, the respondents were asked to indicate the level of influence they believed it had on their choice whether or not to use group work. Responses were rated on a 5 point Likert scale from 'none/very little influence' to 'very high level of influence'.

Part C was dedicated to a number of demographic questions including academic positions, age range, and information about their teaching and industry qualifications and experience. The survey concluded with an open opportunity for the interviewee to add any other comment regarding group work and to indicate their willingness to participate further. Interviewees were made aware that further involvement was conditional on the selection process to identify three diverse case studies to represent a cross-section of accounting units, and the ways in which group work was utilised. For those selected for the case study phase, further participation included periodic discussions with the investigator to make arrangements to survey their students in class, and for the investigator to subsequently interview student volunteers.

4.5.2 Multi-mode method of administration

The academic semi-structured interviews were administered face-to-face and via telephone interviews. With the exception of three unit coordinators from the researcher's own institution (who chose to be interviewed face-to-face), all other unit coordinators participated in telephone interviews. Telephone interviews facilitate access to a broader representative sample (de Vaus, 2002), and in this case to the entire population of academics using group work in their accounting units (of those with unit outlines publicly

available online). Only the academics at the researcher's institution were personally known to the researcher prior to the interviews.

To facilitate ease of access, tutors were interviewed face-to-face when the researcher visited the case study research site, with the exception of tutors at Uni A and Uni H. They were interviewed via telephone. All academic interviews were conducted in the interviewee's workplace at a previously organised and mutually convenient time. For telephone interviews, the interviewee and interviewer were situated at their office desks in their respective institutions.

Since this study was designed to facilitate the exploratory nature of the research questions and to establish what group work means for the teachers and learners of accounting, the ability to clarify misunderstandings, check consistency, and probe answers in depth is equally able to be achieved with both personal contact type modes (i.e. telephone and face-to-face interviews).

The multi-mode strategy employed in this study also helped to overcome the time and cost restrictions associated with using only face-to-face interviews, particularly for interstate participants. It was therefore the most effective combination for increasing response rates. In addition, using personal and telephone interviews to engage respondents, rather than simply relying on self-administering the quantitative rating scale questions, in particular, had an added benefit of providing richer data and ultimately improved the quality of answers. It enabled respondents to expand, explain and clarify their answers and to talk through their responses to any question they may have found particularly 'noisy'[33]. It also allowed the interviewer to evaluate the validity of responses with further questioning. Online or mail surveys were not considered in this instance, given the known limitations with poor response rates, particularly with academics (Oliver, 2011).

The main difference between telephone and face-to-face interviews is the existence (or non-existence) of visual cues, body language, eye contact and a degree of anonymity. However, de Vaus (2002) suggests that even if different modes of collection affect different respondents in unknown ways, it is not likely to affect the relationship between two variables for individual respondents. Furthermore, the more specialised the

[33] Noisy questions are those that appear to be ambiguous or complex to the respondent. For example they may consider that there are a number of interpretations or their answer may depend on the context or circumstances.

population and the more relevant the topic, the less likely these differences will impact on results in any significant way (de Vaus, 2002). Given the uniqueness of the academic interviewees in terms of their research experience, the style and nature of rating scales would also be more familiar to them and help to maintain the quality of responses. At the end of each interview, respondents were invited to check or change any given responses.

It must be acknowledged that a potential weakness in the administration of the academic survey, to begin with, was the relative inexperience of the investigator in conducting interviews for research purposes. Inevitably the progressive acquisition of confidence and ability with each subsequent interview conducted could possibly impact the quality of results from the first interview to the last. To help minimise the impact of inexperience, the interviewer had two training sessions with a supervisor, pre-tested the questions with three colleagues, and was able to draw on questioning skills from previous training and work as a counsellor. As part of the data screening process, after conducting a total of 52 interviews for this study (23 academics and 29 students), transcripts and audio recordings were evaluated for consistency and quality in comparison to later interviews. Using detailed interview question schedules helped to ensure the consistency of the interview process for the sample of academics, and provided valuable experience to conduct the student interviews later. The interviews were found to be consistent over time. A growing familiarity with language peculiarities and accents also enabled this researcher to make a number of corrections to errors made by transcribers.

4.6 Quantitative analysis: Academics

Consistent with the mixed methods approach undertaken, the data analysis techniques employed in relation to the academic interviews were also a mix of quantitative and qualitative analyses. The key considerations to data entry for the information collected from academics is the first issue to be discussed in this section, followed by a summary of each of the quantitative and, in section 4.7, the qualitative examination techniques used.

4.6.1 Data entry

Both the face-to-face and telephone academic interviews were digitally recorded paper and pencil interviews (de Vaus, 2002), where the investigator recorded answers on paper questionnaires but also recorded the interview. The written responses were subsequently checked and verified by referencing the digital audio recording of each interview and the

respective interview transcripts. Respondents' answers to the quantitative component of the survey were then manually entered into the online version of the instrument previously constructed and prepared on *SurveyMonkey*[34].

4.6.2 Missing data

Missing data can be problematic for analysis, therefore to enhance the reliability and validity of the results, each item (missing or not) was coded (Allen & Bennett, 2012; de Vaus, 2002). The benefit of recorded and transcribed interviews, which include survey responses, is that the reasons for omitted data can be accurately identified and coded to increase the quality of the dataset. For the academic surveys there were three main reasons for missing data: the interviewer missed the question; a definitive answer could not be ascertained; or the question was not applicable.

Table 4.5 sets out each reason and the unique missing value code assigned to discriminate between the different reasons for the missing numerical data. Cases with a missing code of zero will be examined in detail with the qualitative responses, as respondents generously provided explanations where they were unable to definitively answer a question.

Table 4.5 Missing value codes

Code	Reason	Example
-1	Interviewer missed the question	• Missed in error; or unable to complete due to time restrictions imposed by interviewee.
0	A definitive answer could not be ascertained	• Where the context would result in different answers. *Eg. 'It depends…'*
9	Question not applicable	• Passed over if not relevant *Eg. Some coordination questions were not relevant for casual tutors*

[34] SurveyMonkey is a cloud based application providing survey software and data storage online. It can be accessed at http://www.surveymonkey.com/

4.6.3 Univariate and bivariate analyses

Utilising the statistical software package for social science (SPSS), version 20, univariate descriptive analyses are conducted to present a distribution of the frequency of occurrence for each of the demographic variables for academics, and secondly to construct a table of frequency, central tendency and dispersion for each of the ordinal variables contained within the Likert scale questions. Given that Likert scales are ordinal in nature, the statistical significance of the descriptive values and data are analysed using Chi-square tests (de Vaus, 2002).

The key concept of bivariate tests is to simultaneously summarise data on two variables. Given the small sample size and the categorical nature of the data, nonparametric cross-tabulations are used to empirically indicate the direction, strength and significance of bivariate correlations (Coakes, Steed & Ong, 2009).

4.6.4 Principal component analysis

To examine the main issues for academics, regarding group work in accounting education, and to investigate the factors that contribute to their conceptions of group work, a principal component analysis (PCA) was conducted. Factor analysing techniques are among the most utilised statistical methods for Likert-scale questionnaires (Fabrigar & Wegener, 2012), and PCA is one form of data reduction that is commonly used to summarise a larger number of variables into more meaningfully focused key components.

PCA differs from exploratory factor analysis (EFA). Fundamentally, 'PCA is based on a different underlying mathematical model' (Fabrigar & Wegener, 2012, p. 31), and unlike EFA, PCA is not designed to identify underlying latent constructs. Its purpose is essentially to describe both the unique and common variances of a group of variables. In other words, PCA is 'a model in which a small set of principal components are constructed from the measured variables, and the ability of these components to predict the measured variables is assessed (as indexed by the principal component loadings)' (Fabrigar & Wegener, 2012, p. 32). The PCA technique is therefore the most appropriate method to highlight the key components of group work for the academics in the current study, as identified by their collective responses to the initial rough scale[35] items. To help clarify what variables belong together, and to ensure each component is clearly

[35] Rough scale items refer to the initial construction of scales, given the need to subsequently test their applicability and reliability for what they purport to measure (de Vaus, 2002).

interpretable, the final component list is extracted using the widely accepted, orthogonal varimax[36] rotation procedure (Coakes et al., 2009; de Vaus, 2002). Finally, the non-parametric alternative to the univariate between-groups analysis of variance (ANOVA), the Kruskal-Wallis test, was used to identify any significant differences in the demographic characteristics of academics, which may have influenced the outcome of the PCA.

4.6.5 Limitations

Given the relatively small number of academics surveyed in this study, inferences cannot be confidently generalised from the sample. In the same way, it is commonly agreed that PCA and univariate statistics are bound by several underlying assumptions that need to be addressed when conducting a quantitative analysis of the data (Allen & Bennett, 2012; Coakes et al., 2009), such as sample size. Conversely, recent research has questioned the validity of specific benchmarks and rules of thumb, such as needing a minimum five subjects per variable for factor analysis, as recommended by Allen and Bennett (2012) and Coakes et al. (2009) (de Winter, Dodou & Wieringa, 2009; MacCallum, Widaman, Zhang & Hong, 1999). Inconsistencies regarding absolute numbers have been apparent for some time (MacCallum et al., 1999), however the necessary conditions for what constitutes an acceptable 'small' number, particularly in relation to factor analyses, continues to be examined (de Winter et al., 2009). The latest evidence suggests that small samples, even those well below the standard benchmark of 50, are capable of producing good estimates if the data are well-conditioned[37] (de Winter et al., 2009; Fabrigar & Wegener, 2012; MacCallum et al., 1999).

MacCallum (2003, p. 124) explains that 'when communalities are high, meaning unique variances are low, sampling error will have a relatively low impact on results. But when communalities are low, meaning unique variances are high, the impact of sampling error will be high'. This means that for a sample size equal to the number of academics surveyed in the current study (23), high loadings (λ) of .8 can cohabit with a higher number of factors ($f = 4$), and a larger number of variables ($p = 24$), to produce a reliable

[36] An orthogonal based rotation determines that the resultant components are uncorrelated with one another (Coakes et al., 2009). Varimax maximises the variability in component loadings (Fabrigar & Wegener, 2012).

[37] Research suggests that well-conditioned data include high loadings, a high number of variables, and a small number of factors (Fabrigar & Wegener, 2012).

solution at a 95% confidence level (de Winter et al., 2009). Without dismissing the overall relevance of size and the fact that increasing the absolute number in the sample remains beneficial (de Winter et al., 2009), it is important to note that the limitations normally associated with small sample sizes can be embraced. Furthermore, it is reassuring to note that factorising models are an artificial approximation of reality (Fabrigar & Wegener, 2012; MacCallum, 2003), and therefore acknowledging their imperfections (as long as they are not grossly incorrect), can usefully make interpretations that help to clarify the nature of the phenomena of interest (MacCallum, 2003).

4.7 Qualitative analysis: Academics

The integration of both the qualitative extensions offered by academic interviewees to the standard scale questions, and the more common open-ended qualitative techniques used in the administration of the academic surveys, offers an opportunity to extract more meaningful data (Bryman, 2007). Despite the different approaches and types of qualitative research, the common features in the analytic methods used, broadly involve organising qualitative data into conceptual categories to create themes (Miles & Huberman, 1994; Neuman, 2004). This was the approach undertaken in the current study to analyse the qualitative components of the data collected from academics. The core feature of the analysis is the coding process (Creswell & Plano-Clark, 2011).

In the current study, the manual process described by Creswell and Plano-Clark (2011) was used to analyse academics' qualitative responses, coding directly onto the printed transcript pages. Following Ryan and Bernard's (2003) techniques for identifying themes, the initial pawing through the text involved highlighting key phrases, and underlining the justification provided. Miles and Huberman (1994) warn not to strip the data from the context in which it occurs, therefore this initial coding process also included identifying significant references to the context of the key comment.

To sort the key components of the qualitative data collected from academics, different coloured pens were used to classify participants, as the initial ideas and themes were set out on large sheets of paper to resemble a 'cognitive map' (Miles & Huberman, 1994). Beginning with a wide range of themes, these were systematically consolidated into overarching themes or meta-themes (Ryan & Bernard, 2003), an inductive process commonly referred to as 'clustering' (Miles & Huberman, 1994). An additional helpful step in the analysis was to transfer the clustered themes onto an electronic version of the concept map in Microsoft PowerPoint. This enabled easier refinement, and facilitated

greater clarity of relationships and interconnections, through the movement of textboxes, objects and arrows, during the write up stage of the analysis.

4.7.1 Validation

The core issue of validation arises from concerns about the nature of analysis in qualitative research (Maxwell, 2013; Onwuegbuzie & Leech, 2007a). Golafshani (2003, p. 604) explains that within the qualitative paradigm 'reliability and validity are conceptualized as trustworthiness, rigor and quality'. The trustworthiness criteria are described in terms of 'credibility, transferability, dependability, and confirmability' (Guba & Lincoln, 1982, p. 250). Cho and Trent (2006) argue that in combination these concepts represent 'transactional validity' due to the focus on methods, techniques and strategies that promote trustworthiness, and are capable of verifying an acceptable level of rigour (Onwuegbuzie & Leech, 2007a). Table 4.6 provides a list of the validating strategies employed in the current study, justified by reference to the literature.

Triangulation, the first strategy listed under transactional validity, is arguably the most widely accepted means of reducing systematic bias and improving validity and reliability in qualitative research (Creswell, 2013; Patton, 2002; 2015), and encapsulates many of the other transactional and transformational strategies listed in Table 4.6. There are four types of triangulation, originally identified by Denzin (1978): methods, data sources, analyst, and theoretical triangulation. Within the context of the current study, each of these four aspects of triangulation was utilised and subsequently contributes, to a greater or lesser degree, to the verification and validation of the qualitative analysis (Patton, 2002). Finally, it is important to understand the centrality of the researcher, and the fallibility of human processes, particularly in qualitative analysis. This focus on the researcher underpins the second category of validation approaches presented in Table 4.6, referred to as 'transformational validity' (Cho & Trent, 2006). Since the current study has been undertaken as part of a doctorate, the objectives of this study are closely aligned to Patton's (2002) criteria for establishing investigator credibility. The strategies undertaken attest to the ongoing development of a proficient, reflexive, and holistically engaged researcher (Cumming, 2010).

Table 4.6 Approaches undertaken to minimise threats to validity in the analysis of qualitative data

Category/ Characteristic	Strategies undertaken in this study	Author/s
Transactional validity:	Triangulation	Guba (1981); Patton (2002)
Credibility	Conducting the study over an extended period of time	Guba (1981); Guba & Lincoln, (1982); Maxwell (2005; 2013); Onwuegbuzie & Leech (2007a)
Transferability	Use of purposive sampling; Sampling adequacy	Guba (1981); Guba & Lincoln, (1982); Patton (2002)
	Having rich data & thick descriptions	Guba (1981) Maxwell (2005; 2013); Morse et al. (2002); Patton (2002)
Dependability	Data management procedures: Protection through systematic back-ups; data preparation; creating an audit trail through the maintenance of extensive field notes, summaries & other documentation	Guba, (1981); Guba & Lincoln, (1982); Patton (2002) Onwuegbuzie & Leech (2007a)
Confirmability	The use of quantitative support & comparisons	Maxwell (2005); Guba & Lincoln (1982)
	Checking for representativeness of participants (multisite study)	Miles & Huberman (1994)
	Checking for response outliers	Miles & Huberman (1994)
	Examining rival explanations	Miles & Huberman (1994)
	Methodological coherence	Morse et al. (2002)
	Collecting & analysing data concurrently	Morse et al. (2002)
	Computer software applications	Bazeley (2013); Maxwell (2013); Weitzman (2000); Yin (2015)
Transformational validity:	Holistically engaged researcher	Cho & Trent (2006)
Reactivity	Being aware of changed reactions of interviewee & interviewer	Guba (1981); Maxwell (2005); Patton (2002)
Reflexivity	Explicit self-aware analysis of researcher as central instrument	Finlay (2002); Elliott, Ryan and Hollway (2012)
Investigator responsiveness	Applying creativity, sensitivity, flexibility and skill in using verification techniques such as those listed above	Morse et al. (2002)
Investigator credibiltiy	Establish investigator credibility by reporting personal & professional information about the researcher	Maxwell (2005); Patton (2002);
	Be aware of potential researcher biases and/or predispositions	Merriam (2009); Patton (2002)
	Practise *empathetic neutrality* during interviews	Patton (2002, p. 569)
	Undertake training & preparation to account for inexperience	Patton (2002)
	Having parts of the data independently analysed (analyst triangulation)	Patton (2002)

4.8 Chapter summary

This chapter has discussed the overall design features of this research project and highlighted the integrative mixed methods approach used to examine group work in accounting education. It describes in detail the development of the fully mixed, multi-level, multi-stage, sequential, case-based design, in which the stage two phenomenographic analysis of student perceptions is the dominant feature and therefore provides the research orientation for the design of the study. The purposive mixed sampling strategy employed in this study incorporates five key participant groups, derived from six Australian universities. Commencing with a convenient sample of volunteers, the selection process progressively identified three demographically dispersed case study sites, chosen using a phenomenography inspired maximum variation strategy.

The quantitative and qualitative multi-mode data collection and analysis techniques used to investigate the perceptions and experiences of university accounting academics was also a focal point of this chapter. The methodologies used in relation to the study of the student cohorts will be discussed in the following chapter.

Chapter 5: The student survey and phenomenographic interviews

5.0 Introduction

This chapter will detail the rigorous processes and methodologies undertaken to capture student responses and examine their perceptions and experiences of group work in accounting. Following the comprehensive account of the overall research design and purposive sampling regime described in Chapter 4, the first section in this chapter describes the development of the quantitative survey for students. A detailed analysis of the pilot study will follow in section two. It includes the results of the initial two stage pilot test and describes how overcoming subsequent problems with data collection, and response rates, lead to a third iteration of the pilot study. Section three outlines the process of data collection for the student survey, while section four explains the testing procedures, and method of analysis, used in the quantitative stage of the student study.

Sections five to seven will focus on the qualitative phase of investigating student perceptions of group work, beginning with details of the phenomenographic interview process, and following with a description of the phenomenographic approach to analysing the qualitative data collected from students, at each of the three research case study sites. Finally the chapter summary will conclude this second methodology chapter that has provided an in-depth account of the mixed methods research design used in this study.

5.1 Data collection Part 3: Student surveys

Students of accounting were first surveyed about their perceptions and experiences, as part of the stage one quantitative analysis of this phenomenon, group work. As alluded to in earlier chapters, one of the issues with the group work literature in accounting education, and higher education generally, is that the topic area is so broad and complex, that prior studies have tended to develop their own unique survey instruments. Very few are ever tested for robustness or replicated in other studies. One exception is a questionnaire originally developed by Garvin et al. (1995), which was subsequently used in various forms by others (Bourner, Hughes & Bourner, 2001; Dyball et al., 2007; Mills, 2003). However, the Garvin et al. (1995) instrument is designed to evaluate a specific group work task, and like other university evaluations of the teaching and learning experience, it focuses on what students liked best and least about the project being evaluated, what was learnt, and how it could be improved. A subsequent search of the literature failed to find a suitable existing instrument to meet all the aims of the current

study, particularly in relation to the investigation of group work. Given the exploratory nature of this study, it was appropriate therefore to develop a new inventory of questions to help identify what group work means to students; to explore their perception of interdependence; and to better understand the underlying factors influencing their conceptions of group work in accounting.

The revised two-factor study process questionnaire (R-SPQ-2F) devised by Biggs, Kember and Leung (2001), was also incorporated into the construction of the new survey instrument used for this research. The link between the study process questionnaire (SPQ), which is based on the 3P (presage-process-product) model of student learning (Biggs, 2003), and student experiences of a phenomena within their learning environment, is well established (Biggs, 1987; Marton & Säljö, 1976; Prosser & Trigwell, 1999; Trigwell, Ellis & Han, 2012; Trigwell & Prosser, 1997). While beyond the scope of the current study, the inclusion of the R-SPQ-2F in this way is consistent with Ramburuth and Mladenovic's (2004) use of the study process questionnaire (SPQ) to measure Australian accounting students' orientation to learning, and the Hall et al. (2004) study, that utilised the instrument to measure changes in students' approaches to learning, following the implementation of a group work curriculum intervention strategy. Likewise, Trigwell et al. (2012) utilised the R-SPQ instrument in combination with newly developed scales that measured student experiences of emotion in their learning situation.

Prosser and Trigwell (1999) advocated, from a constitutionalist view, that 'students' prior experiences, perceptions, approaches and outcomes [are] simultaneously present in their awareness' (p. 17). Capturing this data in combination therefore is insightful, and provides opportunities for future research to explore further the iterative and simultaneous nature of these aspects of students' experiences, perceptions, and approaches, particularly in relation to their outcome expectations for group work.

5.1.2 The survey instrument

The complete student survey comprised three main parts:

Part A: 11 questions about group work (51 items);

Part B: R-SPQ-2F (20 items) - (for future research); and

Part C: demographic questions (15 items).

In total, the survey contained 86 questionnaire items, displayed variously as single questions or grouped into related constructs to help the respondents better understand the context of the questions (Neuman, 2012). All items were presented as closed questions,

with space available to specify or expand only provided in Part C, the demographic section, and in a final comment box at the end of the survey. This strategy of using mostly closed-ended questions, with responses measured on a Likert-type rating scale, is typical in opinion surveys, and facilitates quick analysis by the respondents and the researcher (Gideon, 2012a). In developing all aspects of this survey instrument, decisions were made in line with generally accepted design principles for survey research (de Vaus, 2002; Dillman, 2000; Gideon, 2012b; Schaeffer & Presser, 2003). The following descriptions highlight some of those key decisions.

As shown in Appendix 11.2, the survey instructions explained that the survey was voluntary and anonymous, and that there were no specific risks associated with participation. It advised that space was provided at the end of the survey to identify other issues not raised and for students to indicate their willingness to participate further in follow up interviews. Students were directed to a separate page to complete the further participation questionnaire (see Appendix 12). To further provide an appropriate internal decision frame for respondents (Schaeffer & Presser, 2003; Stalans, 2012), the introduction also included the working definition of group work that was developed for this study (see Chapter 1).

The design and construction of this survey instrument for students has also taken into consideration item-context effects (Tourangeau & Rasinski, 1988), such as the order and wording of questions (Stalans, 2012); the possible 'priming' effects of prior items (Tourangeau & Rasinski, 1988); the use of heuristic processing (Gigerenzer & Gaissmaier, 2011); as well as question format and response categories, such as the number of categories, and the labels and intervals used (de Vaus, 2002; Schaeffer & Presser, 2003).

5.1.2.1 The design of Part A: Group work questions

Questions about group work in Part A begin with three straight-forward relative frequency questions:

1. To what extent are you required to work in groups in your accounting subjects?
2. To what extent are you required to work in groups in your other subjects?
3. To what extent do you think group work should be used in your accounting subjects?

These initial questions are presented in a five-point Likert scale format (from 1

'never' to 5 'always'), and were specifically chosen to be the introductory questions. They were designed to be easy to answer, giving students confidence in their ability to complete the questionnaire (Neuman, 2012), as well as introducing them to the evaluative nature[38] of the survey. The survey is essentially an 'attitude survey' in which 'judgmental carry over effects' can occur if students apply a particular standard or dimension from the outset (Tourangeau & Rasinski, 1988, p. 305). Likewise question 4, presented as the first small group of 4 construct type scaled questions, was used as a priming mechanism to 'trigger a conscious retrieval process' in which the student respondents would likely be able to more readily recall their views on group work for each of the attitude question sets to follow (Tourangeau & Rasinski, 1988, p. 303). These questions included both positive and negative dimensions of group work and were measured using a seven-point Likert scale (from 1 'very strongly disagree' to 7 'very strongly agree'). Students were asked to indicate how strongly they agreed or disagreed with the following four statements:

i. I like to interact with other students in my learning situation
ii. I've had positive experiences thus far working in groups in my accounting subjects
iii. As a student I would rather work on my own
iv. Group work is generally perceived negatively by other students.

The remainder of Part A comprised a series of specific questions arranged into scale items and grouped under four key elements of group work. These were identified in Chapters 2 and 3, and linked to the application of the social interdependence theoretical framework and team-based learning. Table 5.1 presents each of four constructs: group formation; group processing; individual accountability; and interdependence; together with the key components of each construct, and the relevant supporting literature. Notably, each set of questions that were developed to measure the respective concept, has been derived from the literature alone, and therefore form only a 'rough scale' (de Vaus, 2002, p. 182). It is also important to note that these initial scales represent the combination of key elements identified in the literature as illustrated in Table 5.1.

[38] Relative frequency questions require some judgement, whereas absolute frequency questions simply require retrieval from memory of an exact number (Tourangeau & Rasinski, 1988).

Table 5.1 The four principal constructs measuring students' attitudes and perceptions of group work

Question	Construct	Key elements	Supporting literature
Q5 *(7 items)*	Group formation	self-select or assigned; time; group maturity; trust; team spirit; promotive interaction; mutual support; cohesion; diversity.	(Hilton & Phillips, 2010; Hoegl & Gemuenden, 2001; Johnson et al., 2007; Mejias, 2007; Napier & Johnson, 2007; Prichard, Bizo & Stratford, 2006; Strauss et al., 2011; Swanson, Gross & Kramer, 1998; Sweet & Michaelsen, 2007; van der Laan Smith & Spindle, 2007)
Q6 – Q8 *(3 singles)* Q9 *(12 items)*	Group processing	communication; interpersonal skills; coordination; conflict resolution; management; monitoring progress; training; development and feedback from staff; support; skill development; satisfaction.	(Ballantine & McCourt Larres, 2007; Chapman & Stuart Van, 2001; Cheng, Shui-fong & Chan, 2008; Hoegl & Gemuenden, 2001; Järvelä & Järvenoja, 2011; Johnson & Johnson, 2013; Johnson & Johnson, 2005b; LePine et al., 2008; Lizzio & Wilson, 2005; Mejias, 2007; Napier & Johnson, 2007; Prichard et al., 2006; Sweet & Pelton-Sweet, 2008; Van Meter & Stevens, 2000)
Q10 *(6 items)*	Individual accountability	individual contributions – effort; work ethic; responsibility; equal, balanced participation.	(Cottell & Millis, 1992; Hoegl & Gemuenden, 2001; Johnson & Johnson, 2004; Johnson et al., 2013; Mejias, 2007; Michaelsen & Sweet, 2008; Slavin, 1995)
Q11 *(16 items)*	Interdependence	common goals; goal achievement; outcome satisfaction; understanding; motivation; more ideas; team effectiveness; collaboration; relying on each other; sink or swim together; confidence in ability of others; helping; sharing; reflexivity.	(Ballantine & McCourt Larres, 2007; De Dreu, 2007; Johnson & Johnson, 2005a; Johnson, Johnson, Roseth & Shin, 2014; Kennedy & Dull, 2008; Ramsay et al., 2000; Slavin, 1996; Tjosvold, 1986)

Tests of unidimensionality and reliability were conducted in an exploratory factor analysis to select the best items for creating a final scale for future iterations, and for determining the underlying constructs statistically. The findings are presented as part of the results for this study in Chapter 8.

As noted in Table 5.1, each of the construct scales included various numbers of items (questions). The key elements represent the essence of the questions that make up the constructs. The questions included both favourable and unfavourable statements.

5.1.2.2 Part C: Demographic questions

Collecting information to construct a demographic profile of the study's sample underpins social science research. Driven by a set of research questions related specifically to human perceptions and experiences, the current study, therefore, also requires some key socio-demographic information about participants, to better understand their perspectives and to identify any anomalies associated with a particular demographic characteristic.

To improve the response rate for Part C, the demographic questions were reserved for the third and final part of the student survey. Even though the anonymity of the process was assured, this strategy provides respondents with the opportunity to voluntarily assess their willingness to provide personal information, in light of the questions asked, and the responses they made earlier in the survey (Gideon, 2012b).

The Part C demographic questions included respondents' gender and age, based on the Australian Bureau of Statistics (ABS) age groupings, but also focused specifically on collecting sociological data related to their education, language and residency status, as well as specific lifestyle questions and time commitments given to their university studies. The 15 items in this section of the survey can be examined in the survey document provided at Appendix 11.2.

This section, together with the other parts of the survey described above, completes the final version of the student survey that was granted ethical clearance by the Tasmania Social Sciences Human Research Ethics Committee, and subsequently used in this study. However, the development of the instrument involved a long iterative process that was conducted in three stages: 1) the pre-test stage; 2) the declared pilot test stage; and 3) an undeclared full implementation of an online survey. In combination these stages represent the pilot testing procedures undertaken. The process and results of the pilot testing are detailed next.

5.2 The pilot test

Initial pilot testing of the student survey was undertaken in two stages. Stage one was the pre-test stage, and stage two was a full 'declared' pilot test (de Vaus, 2002), where participants were told it was a pilot test, and specifically invited to be part of that stage. The aim was to replicate the proposed sample study and administrative procedures, as closely as possible, given resourcing limitations. Although the practice of pilot testing is highly regarded, information about how pre-tests are conducted and what investigators

learned from them is rarely reported or only reported in a very minimalistic manner (Converse & Presser, 1986; Presser et al., 2004). Therefore, recording the process in detail here will help to bridge the gap in the literature regarding pilot testing exemplars, and the data collected at this point in the research provides valuable information to rigorously evaluate the questions and the survey procedures as a whole (de Vaus, 2002).

Notably, in the current study, despite conducting a successful two-stage pilot-test, the first attempt at administrating the survey in full resulted in chronic response rate issues, related directly to the mode of administration. The declared pilot test sample group failed to detect this potential problem. Nevertheless, the learning opportunities, and demonstrated investigator responsiveness, mean that this part of the overall research methodology is a vitally important component on which to report. The data collected on the failed first attempt at administrating the student survey also became a valuable resource when examined in the context of an undeclared stage three pilot survey.

5.2.1 Pre-test – stage one

Stage one involved refining the questionnaire instrument with feedback from six students using a paper and pencil version of the survey. The six students were from all year groups and represented the disciplines of accounting, engineering, law, psychology, and management. Since group work issues and experiences are not the exclusive domain of accounting students, in the first instance it was important to garner a broad range of perspectives and possible ways in which the questions might be interpreted. The student participants in this stage of the pre-test were very deliberately targeted as 'reflective and confident about their own opinions and mental processes, sensitive to nuances of language…and willing to give up time and thought to help' (Converse & Presser, 1986, p. 53). This narrow subset was drawn from the researcher's family and friends, who were university students at the time. Converse and Presser (1986) advocate the use of family and friends in the pre-test phase since the broader population is unlikely to be able to provide critical judgment about the suitability of questions devised in the early development period. In addition three accounting academic colleagues pilot tested the individual questionnaire items, while another academic colleague from the area of science and education tested an online version of the survey in this initial pre-test. de Vaus (2002) suggests that when pre-testing a survey for a specific group (such as undergraduate accounting students) 'it is helpful to obtain feedback from key insiders [in this case, the academics] who have a good knowledge of the group' (p.117). It is also recommended

that other research professionals be utilised in the pre-test process (Zikmund, 2003). All participants provided written and verbal feedback on the construction of individual survey questions, and the order of questions, as well as timing issues. A number of changes were made to improve the meaning of questions, remove redundant questions, and/or to change the order or scale index to which a question belonged. The instrument was then tested again, this time with 18 second-year accounting students, who closely resembled the main study sample group.

5.2.2 Declared pilot test – stage two

Stage two of the pilot test elicited more formal responses to the complete questionnaire. Second year Financial Accounting students from the researcher's own class were informed about the pilot study during a lecture and invited to provide contact details if they were interested in participating. These students would not be part of the main study. Thirty students volunteered, which represented over half of those present at the lecture. The administration of the pilot survey was strategically delayed a further three weeks thereby helping to create some distance in time and sense of commitment for those who had volunteered. The plan was to allow volunteers 'a cooling off' period. When they received the email three weeks later they would have had time to re-consider whether or not they still wished to complete the survey and whether or not it was convenient to do at the time (as it would be for the actual test group). Eighteen of the original thirty volunteers completed the survey (a 60% response rate).

The pilot survey was administered online, using *SurveyMonkey*, as was planned for the main study. Students also tested the link to a separate page where survey respondents would indicate their preference to participate further with interviews. This separate webpage asked the pilot study participants to note the time it took them to complete the survey and for general feedback about the survey instrument itself. Fourteen students completed this additional form with five of them offering to participate in interviews. The goal for the main study was to interview eight students from each research site so the pilot study response of 28% (5/18) of the surveyed sample was pleasing and indicated that the stated aims of the full study were achievable.

The pilot study data also suggested that the aim of achieving maximum variation in demographic characteristics of participants could also be achieved. The pilot study participants comprised 50% males and 50% females (Table 5.2). Participants were also evenly split between ESL students and English first language students (50/50). Notably,

around 45% of all participants had previously deferred their university studies resulting in a higher median age range for second year undergraduate students (22-25 years). There was a slightly higher proportion of younger female students (89% compared to 67% of males who were under 26 years of age) and no students over the age of 29 years. The pilot study group confirmed that group work was regularly undertaken in accounting subjects (often/always 66.7%), but students rarely or occasionally (88.9%) received any training or help with group processes. Despite the lack of guidance, the majority (88.9%) thought that group work should be part of the accounting curriculum.

The purpose of testing the instrument as a whole, in this second stage, was to check the changes previously made as well as evaluating the flow, question skips, timing, and respondent interest (Converse & Presser, 1986; de Vaus, 2002). A couple of small technical issues with the online software were identified (eg. in the use of question skips and prompts for missed responses). It was decided not to force a response to the scaled item questions because 'missing' answers may in themselves provide an indication of an underlying problem with the question.

Furthermore, forcing a response can potentially introduce measurement errors into the data set (Neuman, 2004). Dillman (2012) also questions the ethical legality of forced questions since all survey responses should be completed voluntarily. The pilot tested version of the survey instrument contained a total of 71 questionnaire items (arranged into 15 questions or sets of questions) and 15 demographic items. Missed items for the stage two pilot study numbered only four of the total 1638 (91x18) data points tested. As each of the four missed items differed, it was considered a positive response to the overall instrument.

Table 5.2 Pilot study stage 2 participants

Variable	Male	Female	Total	Percentage of total
Age:				
18 - 21	3	3	6	33.3%
22 - 25	3	5	8	44.4%
26 - 29	3	1	4	22.2%
Total	**9**	**9**	**18**	**100%**
ESL[a]	4	5	9	50%
English-1st lang.	5	4	9	50%
Total	**9**	**9**	**18**	**100%**
School to uni	5	5	10	55.6%
Deferred uni.	4	4	8	44.4%
Total	**9**	**9**	**18**	**100%**

[a]Students for whom English is a second language

The time taken to complete the questionnaire ranged from 10 minutes to 30 minutes as noted by 11 students on a separate feedback sheet. The average was 18 minutes. Two of the three students who spent 30 minutes answering the questions identified themselves as Chinese. One of these students made a comment that the survey was "quite long" (PS student 6). To ensure the survey was not unnecessarily biased against ESL students, further analysis was performed on the entire pilot study sample. Using the start and finish time stamps recorded on the online *SurveyMonkey* database, the average time for all international student participants was 18 minutes as was the overall mean for all 18 students. This finding reflected the accuracy of the self-reported data. Noting that computerised time stamps are based on actual login and logout times, and do not account for interruptions, it appeared reasonable to budget for between 15 and 20 minutes to complete the survey.

One pilot survey student noted that there were "too many group questions…got disinterested" (PS student 11). This is a valid observation. de Vaus (2002) suggests that removing, moving or providing a greater variety of questions may help avoid such monotony or disinterest. However in the earlier development stage of the survey a conscious effort had been made to vary the types of questions and include single five-point scaled questions with grouped seven-point scaled items. The length of the survey (Converse & Presser, 1986; Dillman, 2000), as well as question format and survey topic (Millar & Dillman, 2012; Neuman, 2004), can impact on the way students might respond to a survey. So too can the individual's personality, gender, economic status, and/or social engagement (Porter & Whitcomb, 2005). An apparent variation in student attitudes and responses can be gleaned when comparing another student's response to the pilot study final question: *'Having completed this questionnaire are you now more likely to think about group work differently?'* Commenting on their involvement in the pilot study the student responded, "[I] understand the group work much deeper than before, this is an excellent experience, thanks" (PS student 12).

Seven of the 18 pilot study participants provided additional comments regarding their general experience of group work. All comments related to the impact that group formation and composition had on their experience. Coding responses to open-ended questions in stage two of the pilot test can help highlight potential difficulties for coding later on, or identify areas of concern not adequately covered by the survey (de Vaus, 2002). On this occasion, the open-ended responses provided affirmation for the structure

of the survey instrument which grouped together sets of questions about group formation, group processes, individual accountability, and interdependence, in that order. Notably, the area of most concern for students was addressed early in the survey. After further analysis of the instrument structure it was decided to add the numerical codes for each of the matrix (or scale) question choices (i.e. 1.Very strongly disagree…7.Very strongly agree) to enhance the understandability for students making a choice between them. No further alterations were made to the instrument. Stage one and two had met the recommendations for pre-testing questionnaires of at least 20 people from 3 different groups (Frazer & Lawley, 2000) (in this case academics, accounting students, and other university students).

However, as became evident, pilot tests are subject to a number of limitations. They are generally limited by time and funding restrictions, and different pre-test methods identify different types of problems (Presser et al., 2004). Presser et al. (2004, p. 111) further acknowledge that 'computerized modes of administration pose special challenges for pre-testing'. In the current study, two additional problems were identified with the implementation of the online survey: a low response rate to email invitations; and a severe response bias in the characteristics of respondents. The outcome was the abandonment of the data set for the purposes of the main study, instead presenting the valuable lessons learned here, as stage three in the pilot test. The following section discusses response rates and the concept of non-response error and outlines the process which led to the stage three pilot study. Significant procedural changes resulted.

5.2.3 The online survey – stage three

The online student survey was first administered to a full cohort of 342 first year accounting students at Uni A. The case study groups, initially selected to participate included: 1st year accounting students at Uni A; 2nd year accounting students at Uni B; and 3rd year accounting students at Uni C. With approvals granted from each of the respective institutions, this first cohort of students was invited to participate via their university email accounts. As the study was being undertaken by a single researcher, the survey was to be administered one institution at a time. Students were initially given 14 days to complete the online survey. A separate information sheet was attached to the email with the link to the online survey embedded as a hyperlink in the body of the email. Only 22 students (6%) responded to the first call. Students were reminded in class by their lecturer and a follow up reminder email was sent one week later, which resulted in

a further 16 responses. In total 39 out of 342 students (11%) responded. Four students logged out after only 1 to 4 minutes, and these were eliminated from the data set due to incompleteness, leaving a total of 35 respondents (10%). Notably the response rate could be distorted because it included the 'unreachable' students (de Vaus, 2002), who did not or could not access their university email. Nevertheless, it was dangerously low and important to address quickly and decisively.

5.2.3.1 A low response rate

One suggested approach for dealing with a low response rate is to extend the data collection period and implement strategies to encourage more responses (Creswell, 2008). However, focusing solely on trying to increase response rates can potentially add to the non-response error factor if the sample number is buoyed by more of the same type of participant (Beullens & Loosveldt, 2012). Moreover, relentless email reminders are not always appealing to students (Sax, Gilmartin & Bryant, 2003). More importantly, time is limited when working with students in the confines of a semester. The online survey was sent to students in week 10 of a thirteen week semester. Time horizons were governed by the need for students to have experienced the phenomenon being tested (group work) (Krosnick, 1999), but also to avoid examination periods, and the possibility of survey fatigue, if the implementation of the online survey clashed with the university's end of semester student evaluations of teaching (Adams & Umbach, 2012). To make an informed decision it was decided to first analyse the data collected.

5.2.3.2 Non-response error

The final response rate of 10% was very low[39], rendering the data vulnerable to the potential threat of non-response error[40] (Dillman, 2000). Clearly, poor response rates and non-response bias are not the same thing (Babbie, 2008; Sax et al., 2003). Creswell (2008, p. 403) explains that 'with a low return rate, the key issue is not necessarily how many people returned an instrument, but whether bias exists in those who *did* return it'. Rather than simply reporting this result as a limitation (Creswell, 2008), further analysis was

[39] As a rule of thumb, 30% is the accepted convention for small sample sizes (<1000) (Neuman, 2004).

[40] 'When a significant number of people in the survey sample do not respond to the questionnaire *and* have different characteristics from those who do respond, when these characteristics are important to the study' (Dillman, 2000, p.10).

conducted which uncovered a response bias in the characteristics of the respondents. This issue is important given that the phenomenographic methodology to be used for the interview stage is based on variation (Entwistle, 1997), meaning that diversity in the sample population is required to support the objective of the study.

Table 5.3 presents the descriptive statistics for the demographic characteristics of the online student respondents. Consistent with prior studies of student survey respondents (Dey, 1997; Porter & Whitcomb, 2005; Sax et al., 2003; Spitzmüller, Glenn, Barr, Rogelberg & Daniel, 2006), the most highly represented group was young, Anglo-Saxon, and female. A disturbing feature of the distribution of respondents in this case, however, was that 100% of them were Australian domestic students, the majority for whom English was their main language (97%). Class list information showed 21% of enrolled students were international. Clearly all international students were non-respondents. This discrepancy highlights a serious response bias, especially given the rapid increase in international student numbers in the Australian higher education sector in recent years, and particularly in accounting programs (Guthrie et al., 2014).

5.2.3.3 Descriptive analysis of online survey responses

Given the small number of responses, statistical inferences could not be made (Dillman, 2000). However for the purposes of simply analysing the characteristics of the sample respondents, some frequencies provided useful information about the tendencies of those who did respond.

Specifically, all 100% of the online survey respondents claimed they were occasionally, often or always required to work in groups in their accounting units. Despite

Table 5.3 Respondent characteristics: Online student survey

Variable	Male	Female	Total	Percentage of total
Age:				
18 - 21	8	13	21	61.8%
22 - 25	2	0	2	5.9%
26 - 29	1	3	4	11.8%
30 - 44	2	4	6	17.6%
45 - 64	0	1	1	2.9%
ESL[a]	1	0	1	
English-1st lang.	12	21	33	97.1%
Permanent Res.	13	21	34	100%
School to uni	5	8	13	38.2%
Deferred uni.	8	13	21	61.8%
Total	**13**	**21**	**34**	**100%**

[a]Students for whom English is a second language

this, 71.4% of the students claimed to have never or rarely received any training or specific team based resources and 80% said that their lecturers never or rarely monitored team progress. The majority (71.4%) also believed that group work at university was not important at all or only moderately important to their future careers.

Question 4 asked about students' conceptions of group work generally. Although 62.8% indicated that they liked interacting with others in their learning situation, only 37.2% reported having had positive experiences of working in groups in their accounting subjects. Most (71.4%) would prefer to work alone, and the same percentage of students (71.4%) believed group work was generally perceived negatively by other students.

5.2.3.4 Pilot test – stage three lessons

This third stage of a full pilot test is akin to a final dress rehearsal where every component is tested as if it were the main event. For this reason, it is appropriate that it was not declared to be pilot test, and only subsequently treated as stage three (de Vaus, 2002).

The main lesson to be learned is that the nature of emails, and the internet, as well as the nature of the contemporary university student, all combine to place additional challenges to the successful implementation of web based student surveys. Possible explanations for the low response include mode related obstacles, such as: the amount of spam or 'junk mail' that has become an ubiquitous feature of the web, thereby deterring wary students from participating in yet another unsolicited survey (Adams & Umbach, 2012; Porter, 2004; Sax et al., 2003); the appearance and length of the web survey (Dillman, 2000; Porter & Whitcomb, 2003a; Sax et al., 2003); online access issues; electronic footprints (Sax et al., 2003); and institutional over-use of bulk emails (Adams & Umbach, 2012; Webber, Lynch & Oluku, 2013). There is also support for the fact that social network sites may have made email redundant for many students (Roblyer, McDaniel, Webb, Herman & Witty, 2010).

Studies of student respondents to surveys have also identified particular characteristics that are likely to impact on potential response bias. These include: gender (Dey, 1997; Porter & Whitcomb, 2005; Sax et al., 2003; Spitzmüller et al., 2006); social engagement (Porter & Whitcomb, 2005; Spitzmüller et al., 2006); perceptions of organisational support and procedural justice (Spitzmüller et al., 2006; Webber et al., 2013); economic status (Porter & Whitcomb, 2005); academic ability (Sax et al., 2003); and personality (Dey, 1997; Porter & Whitcomb, 2005). There are mixed results with regard to ethnicity and age (Sax et al., 2003; Spitzmüller et al., 2006).

5.3 Changing modes: In-class survey

The advantages and disadvantages of various modes of delivery continue to be debated (Dillman, 2000; Shih & Fan, 2008). Ultimately however, the choice of mode has to be based on the objectives of the research. It became apparent that to protect the robustness of this study, to meet the study's objectives to use heterogeneous sampling for greatest variation in the interview stage, to increase the response rate, and avoid potentially damaging non-response bias, the student survey would be best administered in class (in paper form). With a captive audience, in-class surveys continue to outperform online student surveys in terms of response rate (Adams & Umbach, 2012; Sax et al., 2003). The decision to change modes was subsequently approved by the Research Ethics Committee.

The format of the online questionnaire was preserved in hard copy form. The survey was simply downloaded from *SurveyMonkey* in a portable document format (pdf). After receiving approval from the Ethics Committee for the procedural amendments, arrangements were made to administer the student survey in the selected classes[41] at each of the chosen research sites.

5.3.1 Administrating the in-class survey

Printed copies of the student survey together with a separate sheet for further participation in follow-up interviews were delivered to the unit coordinators of the selected case study units at each of the three universities, A, B and C. Given the wide geographic dispersion between each of the participating universities, and the need for this researcher to personally conduct the follow-up interviews, the survey was administered in consecutive teaching periods by the respective unit coordinators. Students at Uni C completed the survey in semester 2, 2011; Uni B in trimester 3, 2011; and Uni A in semester 1, 2012.

In consultation with the unit coordinators, the surveys and further participation sheets[42] were distributed to all students attending the lecture/seminar in one particular week. The final revision lecture was chosen for universities A and C, to maximise exposure to the greatest number, and range of student type. Both unit coordinators agreed that traditionally the final lecture was the most-well attended for exam information purposes, and would likely include students who rarely attend lectures. This was an

[41] Refer to Chapter 4, section 4.4.2: Group 2 case studies for information about the selection process, and subsequent changes that needed to be made in relation to the final sample.
[42] See Appendices 11.2 and 12.

important demographic to capture given that assessable group work applies to all students. Being a revision lecture with no new content, it was also more convenient for unit coordinators, and allowed the time for the survey to be completed in-class. Theoretically, students should also have completed their group work by the final week of semester, and be able to readily recall their experiences in the unit. The survey was completed by students attending the final lecture on two different campuses of Uni A, and both the day and repeat evening lecture on the main city campus of Uni C.

The relationship between response rates and demographic characteristics will be discussed more fully in Chapter 8. However it is noteworthy at this point that 85 of the 97 attendees at campus one from Uni A submitted a survey (87.6%), while 30/31 (96.8%) of the students present at the final lecture submitted a survey on campus two. Those present at the final daytime lecture at Uni C totalled 140 students. Seventy-seven students submitted the in-class survey (55%). A repeat evening lecture was held the following day. Sixty students attended that lecture with nineteen students responding to the survey (31.7%).

Uni B differed in size, type, staffing, mode of delivery and teaching space. As a smaller private university, the unit coordinator was the only member of teaching staff for the unit; all classes were conducted in seminar rooms, and repeated in two consecutive sessions (afternoon and evening). Enrolment numbers were small (43) and attendance rates high for every seminar. Furthermore, one of the criteria for choosing this cohort of students was the group project in the pre-requisite unit, completed in the trimester immediately preceding the current trimester. It was important therefore to administer the survey early in the trimester for Uni B students. The survey was administered the first day after census date, in both the afternoon and evening session of week 5. Thirty-eight of the total 43 students enrolled (88.4%) attended that week. Of those present, all (100%) in both the afternoon class (22) and the evening class (16) completed the survey.

In addition to the information provided on the front of the survey instrument, all unit coordinators were provided with three PowerPoint slides to show and read to students prior to the completion of the survey. The short presentation (refer to Appendix 7), invited students to participate, opening with ‘Love/hate group work – have your say!’, and informed them of the voluntary and confidential nature of the survey.

5.3.2 Data entry

After completion, collected surveys and further participation sheets were given to the researcher. Each document was sequentially numbered and (as described earlier in section 4.6.1) the data manually entered into the web-based version of the instrument in *SurveyMonkey*. Using the *SurveyMonkey* interface provided a simple method of data entry where the click of a mouse over a radio button recorded most responses, making it quick and efficient. Furthermore, carefully constructing an online version of the questionnaire supports effective data entry as it enables embedding of automatic checks for response errors, and/or invalid types of responses, missing data, and to set coding protocols. The *SurveyMonkey* data was automatically coded and downloaded into the *Statistical Package for the Social Sciences* (SPSS) format ready for analysis, thereby helping to eliminate potential coding errors (de Vaus, 2002).

5.4 Quantitative analysis

The analysis of the quantitative data collected from the student surveys was conducted using SPSS version 20. SPSS is suitable for achieving the key objectives of quantitative analysis: data preparation; exploring and presenting the data in descriptive summaries to assist in the familiarisation process; testing the reliability of the data; and finally to conduct statistical analyses to test for significant relationships and differences (Cavana et al., 2001; Cooper & Schindler, 2003; Saunders, Lewis & Thornhill, 2007). This section outlines the procedures and techniques used to accomplish these aims.

5.4.1 Descriptive statistics

Basic univariate tests of frequency, central tendency and measures of dispersion were used in the initial descriptive analysis of the data. These descriptive statistics describe the different characteristics of the distribution of scores on each variable (Hoyle, Harris & Judd, 2002), and therefore provide the basis for further analysis. The statistical significance of the descriptive values is analysed using mainly nonparametric techniques, given the use of categorical variables, the ordinal nature of Likert scales and any violation of normality assumptions (Coakes et al., 2009). Primarily, the non-parametric testing procedures undertaken include: Chi-square tests for contingencies, and goodness of fit; post hoc comparisons of independent groups using the Mann-Whitney U test; and the Kruskal Wallis, one-way between groups analysis of variance.

5.4.2 Exploratory factor analysis

The main part of the quantitative analysis was the extraction of underlying constructs, based on patterns of bivariate correlations (de Vaus, 2002; Fabrigar & Wegener, 2012). Exploratory factor analysis (EFA), which is a multivariate statistical method, was used to identify relationship structures and commonalities among many variables, thereby helping to establish a smaller number of related variables (Cohen, Manion & Morrison, 2007), in answer to Research Questions 3, 4 and 5. Since the questionnaire scale items in the current study were devised through the logical grouping of questions from the literature review, this process of statistically analysing latent factors, and reducing data, will help improve the reliability and validity of the overall results (Neuman, 2004). Furthermore, it enables the researcher to examine 'which particular measured variables seem to be influenced by the same common factors, [and therefore]… can reach conclusions regarding the nature of the constructs' (Fabrigar & Wegener, 2012, p. 21). Moreover, factor analysis, which is a form of structural equation modelling, is most useful in exploratory research such as this, and for addressing research questions that have no specific hypotheses regarding directional relationships among the variables (Fabrigar & Wegener, 2012).

Although factor analysis is among the most utilised statistical methods for Likert-scale questionnaires (Fabrigar & Wegener, 2012), one of the main limitations is that it 'relies on normal-theory estimation using Pearson product-moment relations with non-continuous variables' (Justicia, Pichardo, Cano, Berbén & De la Fuente, 2008, p. 359). The fundamental measurement of Likert scale items are ordinal, indicating ranking only and not any meaningful distances between categories (Neuman, 2004). Justicia et al. (2008) addressed the issue by first calculating polychoric correlations on the Likert scaled items in the R-SPQ-2F. However, this option is not available in the SPSS software. An alternative approach, specifically in relation to EFA, is to use a scale of at least 1-7 to better accommodate the treatment of variables as metric, assuming interval-like characteristics (Abascal & deRada, 2014). Notably, single questions of relative frequency in the survey (Qs1-3; 6-8) were measured using a 5-point scale for simplicity (Dawes, 2008). These were not factorised.

5.4.3 Data screening and transformation of survey responses

The SPSS data were first screened for normalcy[43] and any errors that were not captured in *SurveyMonkey*. Negatively worded scale items and missing values were also dealt with by deletion, transforming and/or recoding variables (Coakes et al., 2009). SPSS frequency distributions, visual checks and data sorting were used to double check for out-of-range, inconsistent and/or missing values. Sorting cases on particular variables, for example, helped to identify two cases where English as the main language had been incorrectly coded. On that occasion the language variable was sorted together with other questions about nationality, and discrepancies manually checked on the hard copy documents.

The entry of attitude scale item data was generally controlled through the use of limited choice radio buttons. One unusual case was identified at the data entry stage. The respondent had given the same answer for each question (irrespective of the question's direction) within almost every set of scaled items. This form of 'straight-lining' is generally related to survey fatigue in the later stages of a survey, and is rarely found throughout the survey (Cole, McCormick & Gonyea, 2012). This case was eliminated as it introduced erroneous data and undermined the integrity of the database, given the responses appeared to be made without any consideration of the question. Although 'straight-lining' in any one set of questions may well be legitimate, Cole et al. (2012) found that poor academic ability is indicative of a reluctant respondent who presents this type of satisficing behaviour (Schaeffer & Presser, 2003).

5.4.3.1 Re-coding negative questions

In line with usual practice (Allen & Bennett, 2012; Coakes et al., 2009), the following negatively worded items were reverse coded to reflect the same direction for all items to be included in summated Likert scale scores (de Vaus, 2002).

Q9b	I do not believe that my group experiences have contributed to the development of teamwork skills
Q11b	It's easier to understand difficult accounting concepts by working through problems yourself
Q11e	Group work hinders students' ability to think and act independently
Q11f	Groups simply divide the work between individuals rather than working collaboratively
Q11i	I felt I did not learn anything new during group processes

[43] 'Normalcy' attempts to convey that generic assumptions relating to range, as well as sampling, variability and independence still apply to ordinal and nominal data (Coakes et al., 2009), which make up the majority of data measurements in this survey.

5.4.3.2 Missing data

In the current study two different methods, namely deletion and substitution, were used to address the various levels of potential distortion caused by missing values. Simply coding all missing data with a single code can create problems when using summation rating scales such as the Likert scale measurements used in this study (de Vaus, 2002). Therefore the second form of non-response (item non-response)[44] was carefully analysed in terms of the degree of risk to the overall quality of the dataset.

Risk was assessed based on the location and amount of data missing. Location was measured in terms of the three distinctive parts of the questionnaire: Part A on group work; part B on SPQ; and part C on demographic information. The amount of data missing relates to item non-response. Some students, by error or intent, missed items in isolation. In other cases students either ran out of time or actively chose to leave major parts of the survey blank.

5.4.3.3 Excluding Part A & B 'break-off' responses

Deletion or exclusion is appropriate where missing data are clustered or where the cases to be deleted number less than 15% of the sample (de Vaus, 2002). As shown in Table 5.4, a total of fourteen students (or 5.6% of the sample) provided invalid responses, or did not complete, or continue, past the group work questions in part A. A further 11 students did not respond or only partially responded to questions in part B. Although part B does not form part of the current study, student who broke-off at this point did not complete the demographic information in part C, and were therefore eliminated.

Cumulatively 10.0% of all respondents stopped filling in the survey at various points before the end of the questionnaire. There appeared to be three distinct points of departure or 'break-off' points: at question 5 (the first set of scale item questions); at question 11 (the last and longest set of 16 scale items for group work); and question 12 (the beginning of Part B-SPQ). Three main reasons could explain this behaviour: the overall length of the survey instrument (Dillman, 2000; Sax et al., 2003), some multi-item questions may have been seen as more burdensome (particular with paper based questionnaires) (Millar & Dillman, 2012), and/or students may not have thought the Part B SPQ questions were relevant (Webber et al., 2013).

[44] The two forms of non-response are total non-response (not returning the survey) and item non-response (not completing parts of the survey) (Sax et al., 2003).

Either way, Saunders et al. (2007) suggests that leaving part of a survey blank may imply an answer, in which case the data should not be coded as missing. In addition to the one invalid case (straight-lining) previously deleted, the 24 cases where students essentially withdrew from further participation when they stopped answering questions part way through the survey were also eliminated. These cases were deemed to have too many items missing to be suitable for the planned analysis (Zikmund, 2003).

Analysing the percentage of total non-response (Table 5.4, column 3) and the frequency of 'break-off' responses (Table 5.4, column 6), in terms of institution and individual classes, it is clear that Uni C and more particularly the evening class at Uni C differed significantly from the other two institutions. The response rates alone begin to indicate strong underlying differences in the attitudinal characteristics of the case study sites. At Uni B, all students attending the small, intimate, seminar classes during the day and the evening (100%), participated and completed both parts of the survey, whereas only 18.3% of the Uni C night-class returned valid surveys. Although it is conceivable that time restrictions and/or language barriers may have impacted these results, the unit coordinator at Uni C had commented earlier about the consistently poor attendance rates experienced in the evening lectures and their concern in being able to collect many responses from this group.

Table 5.4: Response rate to student in-class survey

University	1 Number of student attendees	2 Surveys returned	3 % of all surveys returned	4 Part A – (GW) invalid/not complete	5 Part A&B (SPQ) not complete	6 Number of valid surveys returned	7 % of valid surveys returned
A1	97	85	87.6	3	7 (8.2%)	78	80.4%
A2	31	30	96.8		1 (3.3%)	29	93.5%
Sub Total	**128**	**115**	**89.8**		**8** (7.0%)	**107**	**83.6%**
B1	22	22	100			22	100%
B2	16	16	100			16	100%
Sub Total	**38**	**38**	**100**			**38**	**100%**
C1	140	77	55	6	9 (11.7%)	68	48.6%
C2	60	19	31.7	5	8 (42.1%)	11	18.3%
Sub Total	**200**	**96**	**48**		**17** (17.7%)	**79**	**39.5%**
TOTAL	**366**	**249**	**68**	**14** (5.6%)	**25** (10%)	**224**	**61.2%**

A1= Campus 1, Uni A
A2 = Campus 2, Uni A
B1 = Afternoon seminar, Uni B
B2 = Evening seminar, Uni B
C1 = Tuesday morning lecture, Uni C
C2 = Wednesday evening lecture, Uni C

5.4.3.4 Coding isolated missing values

Following convention, isolated missing values have been substituted with a unique code (Allen & Bennett, 2012; Coakes et al., 2009). The chosen code for missing items (-1) is consistent with the coding used earlier in Chapter 4 (Table 4.5) and meets the required criteria of allocating a distinctive code that is different to any other code used to represent a valid response (de Vaus, 2002). Unlike the academic survey data that was collected by telephone interview, the student surveys were self-administered delivery and collect questionnaires, and therefore it is not possible to accurately determine the reason for any omitted values. Consequently, in cases where a student has either missed a single item in error, or has been unable to, or chose not to answer a single item, those variables will be coded with the missing data code -1. In total 44/15,904 (0.0028) of the individual data points entered for Parts A and B were coded as isolated missing values.

Two students chose not to provide any personal demographic information in Part C of the survey. As they represented less than 1% of the sample and their answers to the remaining survey questions were valid, these missing data were also coded -1.

To check for reliability, individual question items were examined for repeated misses, which may have indicated a problem with ambiguity (de Vaus, 2002). In Part A & B only one item (question 11k: *Communication is the key to making group work succeed*) was missed on 3 separate occasions (1.3%), and more likely to have been caused by its position in the questionnaire than its vagueness. The majority of all other missed items in Part A and B were single isolated events. In Part C (demographics) question 27 asked students to estimate the amount of time spent on various university, home, and work activities. This lone question was ignored in part or proved too difficult or vague for around 16.5% of the students, no doubt due to the need to average weekly hours spent on campus, in class, studying independently, and in paid work. Nevertheless, given that the aim of this student survey was to provide an indication of the issues experienced by accounting students in group work, the data collected regarding time commitments was carefully analysed (see Chapter 7).

5.4.3.5 Response rate

In the end a total of 224 useable responses were received representing 61.2% of those invited to participate in the in-class student survey at three different Australian universities. Although the importance of response rates relates more specifically to probability sampling and generalisations, for the three cohorts (the population) from

which this sample has been drawn, this response rate exceeds the minimum 49% required to ensure maximum variation and to draw statistical inferences at a 95% confidence level (Dillman, 2000).

It was not the intention of this study to separately analyse individual classes at each institution, other than to ensure a wide variation of student type was captured. Taken together then, the useable responses from each of the case study institutions (83.6%, 100%, 39.5% respectively (see column 7, Table 5.4)) also exceed Dillman's (2000) requirement of a 38% response rate for sampling more homogeneous groups.

5.4.4 Summary of quantitative analysis

In summary, the quantitative analysis of the student survey data is underpinned by the survey/correlational design (Bryman & Cramer, 2011) used for the stage one examination of student perceptions and experiences of group work in their accounting studies. This section has outlined the quantitative analyses conducted, and highlighted the importance that data quality, measurement, and the robustness of the data screening preparation techniques, have been afforded in this study. The explicit attention devoted to this aspect of the quantitative analysis will provide validity, reliability and overall confidence in the research results.

5.5 Qualitative analysis: Phenomenography

The dominant qualitative inquiry undertaken in this study is grounded in a phenomenographic perspective. This includes the maximum variation sample selection approach described earlier in Chapter 4, phenomenographic interviewing, and the phenomenographic analysis of the qualitative data gathered from students, including the the open-ended question at the end of the survey. It provides the mechanism for addressing Research Question 3: what does group work mean for accounting students at university? Given the influence of this methodology on the overall design of the study, it is important to explain some of its key aspects.

Phenomenography is a qualitative relational research specialisation that describes a particular phenomenon as it is experienced by a person. Although all qualitative research methods make a similar claim to explore and examine personal experiences and accounts of phenomena (Bogdan & Biklen, 2007; Freebody, 2003; Hoyle et al., 2002; Patton, 2015), phenomenography differs in that it identifies variations or differences in conception, and focuses on 'the dynamic interplay between conceptions, expressions and

meanings of expressions' (Anderberg, Alvegård, Svensson & Johansson, 2009, p. 653). Given the earlier discussions in Chapter 1 and Chapter 2, that highlighted the problematic nature of group work in accounting education, and the different conceptualisations that abound, it follows that a phenomenographic approach is the most appropriate methodology to examine the meaning of group work for students.

Furthermore, phenomenographic research emerged from a series of 1970s studies of student learning in higher education, specifically with university students at Göteborg, Sweden (Marton & Säljö, 1976; Svensson, 1997); and since that time has been used extensively in higher education research of learning and teaching (Åkerlind, 2005e; 2008; Barrie, 2003; 2012; Bowden & Green, 2005; Entwistle, 1997; Laurillard, 2013; Marton & Booth, 1997; Prosser & Trigwell, 1999). It is also a readily used methodology in educational PhD research (See for example: Åkerlind, 2005a; Barrie, 2003; González, 2010; Tempone, 2001).

5.6 Student interviews

Phenomenography informed the process for interviewing 29 students[45] individually, at three different Australian universities. Notably, phenomenographic interviewing differs from the methods used in the academic interviews, described earlier in Chapter 4. Åkerlind (2005a, p. 65) explains that 'in phenomenographic interviews, we are trying to elicit underlying meanings and intentional attitudes towards the phenomenon being investigated'. So while this is usually achieved through concrete examples, the key difference is that the phenomenographic interview must move beyond the 'what' questions, and details about the examples, to explore the 'why' questions more deeply. Åkerlind (2005a) suggests that for those new to this type of interviewing, conducting mock interviews or pilot interviews is essential. For this novice researcher, training was undertaken with one of the supervisors, who used role play, alternating the role of the interviewee and the interviewer. In an effort to focus on the importance of the 'why' questions, we practised a technique I refer to as 'the two year old's inquisition'. This is a simplistic, but effective method of continuously asking 'why?' in reply to every response.

[45] In total, 29 students were interviewed. However, one interview transcript was removed from the analyses as the student revealed they had never been part of a group for the purposes of directed group work as per the study's definition. The remaining 28 useable responses were analysed.

It focused on stimulating the ways in which the interviewee understands the phenomenon in question (Åkerlind, 2005a). Although the actual interviews were not as intense, the training served as a timely reminder when prompting the student interviewees for additional information.

5.6.1 The design of the student interviews

Phenomenographic interviews are semi-structured; however, as the opinion, understanding, awareness, and perspective of the interviewee are of upmost importance, the skill and required depth in the data can be just as reliant on the unstructured follow-up questioning (Åkerlind, Bowden & Green, 2005). Therefore, from a phenomenographic perspective it was important to establish rules of engagement, and to prepare an interview schedule based on the format described in Bowden and Green (2005). The full student interview schedule is provided in Appendix 10. The interview preamble included: a greeting and gratitude for the student's generosity and willingness to participate; confirmation that consent forms had been signed and information sheets read; and an overview of the structure and interview procedures. The semi-structured questions focused on three key aspects, known as the primary or target questions. These related to:

1. Group work generally (i.e. what are your initial thoughts when you hear the word 'group work'?)
2. Group work in accounting (i.e. what does it mean to you to have group work included in your accounting subjects?)
3. Relevance to the future (i.e. how do you think you will be apply what you have learned in the future?).

Notably, the third focus area appears to make an assumption that some type of learning has occurred, however the aim was to elicit responses that provided an insight into the students' understanding of learning in the context of group work. Within each of these three key areas, questions followed a similar path of inquiry:

i. *Contextual question* (to set the scene and to give both the interviewee and interviewer time to familiarise themselves with the context);

ii. *Open primary question* (target question based on the main research question);

iii. *Situated example* (to aid retrieval of the underlying meaning and/or understanding of the target question).

Following the format recommended by Åkerlind (2005b), additional probing questions were used to further promote the sharing of what each aspect meant to the individual students. For example probing questions were often framed as: 'What does that mean for you?'; 'Why is that?'; 'How did you feel about that?'; 'Can you tell me what that means?' Furthermore, it is important to avoid leading questions, and to be careful not to allow example details to drive the process, or distract from reaching the core of the issue (Åkerlind et al., 2005). One strategy employed to assist students with feeling confident and comfortable within the interview situation was to begin the opening contextual question asking students to share a little about themselves as a 'university student'. Neuman (2012, p. 236) suggests that 'it is best to make opening questions pleasant, interesting, and easy to answer'. Furthermore, and most importantly, it provides vital evidence to situate the context from which the student is expressing their experiences of the phenomenon.

5.6.2 Reflecting on challenges

In Chapter 4, the key aspects underpinning the validity and quality of a qualitative inquiry were discussed, and it was noted that being a reflective and reflexive researcher is paramount to the process (Patton, 2002; 2015). In light of this, comprehensive reflective notes were kept after each interview, and reviewed throughout the process.

One notable challenge encountered whilst conducting the student interviews related to cultural barriers. For some student interviewees, for whom English was a second language, questions had to be repeated a number of times and in different ways, particularly when English comprehension was limited. It became apparent that the first priority was to assist these students in overcoming interview nerves, as well as English comprehension difficulties, and finally cultural barriers, before beginning to uncover the real meaning of the phenomena under investigation. The approach taken was one of carefully rephrasing questions, trying at all times to avoid possibly leading the response. A concerted effort was also made to create a relaxed conversational atmosphere with appropriate affirming body language, nods, and smiling, helping to build rapport and confidence in the international interviewees. It was clear that these students, only later in the interview, had the confidence to take the lead and share their thoughts and feelings in response to the questions posed. In the interview preamble students were assured that they could refuse to answer any question, or could ask for a question to be repeated or clarified. The results will show that many of the international students, and those who felt

somewhat marginalised within the university environment, were appreciative of the opportunity to speak openly and frankly about their perceptions and experiences of group work.

5.7 Phenomenographic analysis and categories of description

Phenomenographic analysis involves grouping experiences into categories, and establishing 'categories of description'. It requires key differences in holistic meanings to be identified, and a limited number of qualitatively different ways the phenomenon is experienced to be determined (Marton & Booth, 1997). However, it is equally important to understand the commonalities that students share, because similarities are observed *within* each category (Åkerlind, 2005e), and it is from this base that the incremental logical relationships between the categories begin to evolve. Åkerlind et al. (2005, p. 97) explain that 'in phenomenography, it is not enough to simply constitute categories of description; one must also consider the structural relationships between the different categories'; often described in terms of a hierarchical relationship, forming an 'outcome space', (Booth, 1997; Marton & Booth, 1997; Marton & Pong, 2005). Åkerlind et al. (2005, p. 95) further suggest that the structural relationship between categories is often misconstrued as better or worse than the other, rather than being derived on the basis of 'hierarchical inclusiveness', a term which means one category can build on another and therefore include the former.

At a more micro level, it is also argued that 'a conception, [which is the unit of description in phenomenography], has two dialectically intertwined aspects: a meaning (the referential aspect), and a structure (the structural aspect)' (Marton & Pong, 2005, p. 345). Marton and Pong (2005) explain that this structural aspect of a conception is internal, occurring *within* the conception, and therefore differs from the traditional 'outcome space', which describes the hierarchical structure *between* conceptions or categories of description. The internal structural aspect refers to 'the specific combination of features that have been discerned and focused on', that is the way in which the variation has been experienced by the students (Marton & Pong, 2005, p. 335). Nevertheless, phenomenographic analyses in higher education studies tend to incorporate both the internal and external aspects of structure. Together with the referential aspects of conceptions, these combine to create an outcome space for the categories of description (Åkerlind, 2005e; 2012; Barrie, 2006). The justification for combining all aspects is that the phenomenographic focus is on the collective. It 'aims to explore the range of

meanings within a sample group, as a group, not the range of meanings for each individual within the group' (Åkerlind, 2005e, p. 323). Furthermore, it is non-dualistic (Marton & Booth, 1997). Trigwell and Prosser (1997) explain:

> the mind does not exist independently of the world around it…thus, perceptions, approaches and outcomes are not independently constituted, but for analytical and heuristic purposes are considered to be simultaneously present in the students' awareness (Trigwell & Prosser, 1997, p. 243).

5.7.2 Processes and procedures of analysis

In the current study, preliminary referential categories of meaning were first extracted from each sub-group (case study site). This focused approach on analysing a smaller group of 8-10 transcripts at a time is a recommended technique for managing the data, and facilitating a more thorough holistic understanding of the transcripts, especially when performing an iterative phenomenographic analysis (Åkerlind, 2005e).

To help facilitate the iterative process required of a phenomenographic analysis and to establish validity and rigour in that analysis (Bowden & Green, 2005), the following steps were undertaken:

1. All interviews were conducted and all transcripts transcribed before any analysis commenced (Åkerlind et al., 2005).

2. Since the transcription was outsourced to independent service providers, all transcripts were checked and edited by the researcher to ensure they accurately reflected the spoken word, verbatim.

3. Each transcript was later read in its entirety and then re-read while listening to the audio. Preliminary notes were made on the text. Sin (2010) highlights the importance of listening to recordings several times to capture the linguistic structures and complexities that may not be apparent in the written transcript.

4. Taking a break of around six months during the analysis helped enhance the rigor of the phenomenographic analysis, since the analysis was able to be continued by the single analyst, with a fresh set of eyes (Åkerlind et al., 2005).

5. A 'clean' set of transcripts was printed and bound together in case study groupings. The next stage of the analysis was more intensive so limiting the number of interviews to be analysed at any one time was consistent with the

recommendation that around 10 transcripts is ideal (Åkerlind, 2005b). Analysing each case study in the context of their respective universities also provided scope for these context sensitive experiences.

6. The bound transcripts were re-read and handwritten notes made on them. These were then compared to the original preliminary analysis and the combined analysis recorded against the relevant parts of transcripts using NVivo[46].

7. To keep track of the analysis process and to help manage the volume of data, the electronic transcripts were loaded into NVivo (Sin, Reid & Jones, 2012), with a separate data file created for each case study. CAQDAS programs such as NVivo facilitate data management and enable better controls over the recording, storing, indexing, sorting, and coding of qualitative data (Leech & Onwuegbuzie, 2011).

8. A summary note memo was created for each transcript in NVivo and these summary notes were used extensively as a verification tool when revisiting identified conceptions within the transcripts.

9. In NVivo, nodes were created and grouped into two main areas: 1. responses to interview questions, which resembled a content analysis type approach; and 2. themes or conceptions, which captured the initial identification of possible categories of description, as required in phenomenography. Simultaneously working with the two methods was critical in enabling the researcher the freedom to interpret and distinguish between data that was relevant to the phenomenographic analysis, and data that was not, without fear of prematurely eliminating something of importance.

10. NVivo also accommodated, with relative ease, the combining and splitting of similarities and differences, as well as critical and non-critical variation, within and between, theme areas/conceptions. Most importantly, the collation of extracted interview quotes that make up the essence of the meaning being assigned

[46] NVivo is a computer-assisted qualitative data analysis software (CAQDAS) program developed and distributed by QSR International Pty Ltd.

to each category (Entwistle, 1997), was facilitated more efficiently and effectively with this program.

11. Closely following the recommendations set out in Bowden and Green (2005), only evidence contained within the transcripts was used when establishing the categories of description.

12. The analysis of the final outcome space and the relational structure of the categories of description occurred after all categories had been finalised; and likewise, within each sub-set or case study group (Green, 2005).

The qualitiative open-ended question at the end of the student survey was also analysed using a phenomenographic approach. For an in-depth study, interviews are the main mode of research, however, phenomenographic analyses of open-ended survey questions, and other forms of written text are also commonly used (Åkerlind et al., 2005).

5.8 Summary

This chapter describes the justification of the mixed methods research design employed in this study. Focusing on data collection, and the subsequent analytical procedures undertaken in the investigation of students' conceptions of group work in accounting, this chapter has detailed the development and design of the three-part survey instrument for students, and highlighted some of the nuances of conducting mixed methods research with student subjects. The three stage pilot testing of the student survey provided rarely reported in-depth detail of the process that led to changing modes, from online to in-class administered surveys. Following the preliminary descriptive analysis of the quantitative data, the focal point of the stage one quantitative analysis of student perceptions is the extraction of underlying constructs using exploratory factor analysis (EFA).

The second half of this chapter was dedicated to the implementation of stage two in the research design. It described the underlying theoretical concept of phenomenography, detailing the phenomenographic approach used in the design and conduct of the student interviews, the ensuing analysis, and the procedures for developing the key categories of description. These sections have provided the foundation on which the major outcomes of this research will be built. The following four chapters will report on the results of these investigations.

Chapter 6: Group work in accounting units: a survey of academics

6.0 Introduction

As part of the first phase of the two-stage research design utilised in this thesis, this chapter will explore the prevalence of group work in accounting units, and survey accounting academics' perceptions and experiences of group work. The main purpose of this chapter is to answer Research 1: To what extent and in what ways is group work used in Australian university accounting schools; and Research Question 2: How do accounting academics perceive group work within the accounting curriculum? It also aims to explore part of Research Question 4 that asks: What are the factors that contribute to staff conceptions of group work in accounting?

The first section describes the results of the initial search of unit outlines for group work activities being used in accounting units, across eight Australian universities. The second section introduces the academic participants, with section three providing an analysis of the quantitative data collected during the telephone, and face-to-face interview surveys, with 21 full-time and two casual accounting academics, from six of the original eight universities. Section four concludes this chapter.

6.1 Unit Outlines

In order to address Research Question 1, a total of 90 unit outlines were analysed using content analysis. Table 6.1 outlines the distribution and subject areas in which group work was included and/or assessed at the seven accounting schools with publicly available unit outlines (Uni A to G), and Uni H which was included as a control for accounting schools which had not publicly provided their unit outlines online. The subject/knowledge areas listed in Table 6.1 are based on the core curriculum/knowledge[47] areas prescribed by the professional bodies, that is: accounting systems and processes (basic accounting); financial accounting; management accounting; accounting information systems; finance;

[47] In 2015 the accounting professional bodies revised their accreditation requirements for accounting programs in Australia. One of the changes related to the terminology used. Previously referred to as 'knowledge areas', the accounting subject areas are now referred to as 'competency areas'(CPA & CAANZ, 2015). For the purposes of this analysis, reference is made to 'knowledge areas', as per the terminology in use at the time the unit outlines were published. See Appendix 13 for further information on the respective amendments made to the accreditation guidelines for the period 2009 - 2015.

Table 6.1 Group work included in accounting unit outlines for 2009

Knowledge area/ Subjects	Uni A	Uni B	Uni C	Uni D	Uni E	Uni F	Uni G	Uni H*	TOTALS
Total Acc. units taught	12	7	14	8	15	12	13	9	90
1st year									
Intro. accounting 1A		30% Proj.	25% Proj.	25% Ass			20% Ass (s1)		4
Basic accounting 1B			15% Pres.			20% Ass [2]		20% Poster	3
Commercial law							Tutorial-NA		
Economics									
Quantitative methods									
2nd year									
Acc. info. systems			40% P&R			25% Ass		30% Proj.	3
Financial accounting					20% Proj.	10% Ass [2] 10% Ass [2]	20% Pair Ass 20% CS		5
Management Acc.		20% Proj.				25% CS	20%CS		3
Financial management			100% 3Ass						1
Corporations law							Tutorial-NA		
3rd year									
Accounting theory		15% Proj.				20% Pairs/ind	Tutorial-NA		2
Audit & assurance	30% CS 10% Pres.	20% CS incl. weekly pres.	Tutorial-NA		15% Ass (pairs)		Tutorial-NA	Tutorial-NA	3
Taxation									
Acc. info. systems[1]				20% Proj.					1
Advanced Financial[2]		15% Pairs/ind 30% P&R			20% P&R	20% CS			4
Adv. Mgmt. acc[2]		15% Pres.	25% Pres.		25% P&R 30% P&R	35% 2x CS	Tutorial-NA		5
Graduate Attribute	0	6	1	2	0	2	4	2	17 (50%)
Teamwork unit LO	0	0	1	0	0	2	0	0	3 (9%)
TOTAL number of units using group work	**1 (8%)**	**7 (100%)**	**5 (36%)**	**2 (25%)**	**5 (33%)**	**8 (67%)**	**4 (31%)**	**2 (22%)**	**34 (38%)**

KEY: Ass.=Assignment; CS=Case Study; ind=individual; LO=Learning Outcome; NA=Not Assessed; P&R= Presentation & Report; Pres.=Presentation; Proj.=Project.
[1]AIS is usually offered as a 2nd year unit but at one university it was a 3rd year unit.
[2]Advanced 3rd year units include financial & management analysis type units.
* This information has been taken from unit outlines that were not publically available.

commercial and corporations law; taxation; auditing and assurance[48]; accounting theory; economics; and quantitative methods (CPA & ICAA, 2012; ICAA & CPA, 2008; 2009; Mathews, 2004). Although accreditation guidelines suggest that their core curriculum/knowledge areas are 'not a list of prescribed courses' and 'diversity of approaches…is desirable' (ICAA & CPA, 2008, p. 2; 2009, p. 2), Mathews (2004) found that all Australian university undergraduate accounting programs have a common structure with subject titles and content being closely aligned to the topics listed by the professional bodies. The size and distribution of subject areas in three year accounting majors were common across all institutions, with the main variation being the treatment of 3rd year units, in particular, *'Accounting Theory'* (Mathews, 2004). In the current study, provision has been made (see Table 6.1) to include the noted variation in the structure of the 3rd year component of accounting majors. For example, not all universities include advanced strategic management accounting subjects or advanced accounting information systems.

The accounting professional accreditation guidelines also 'require the teaching of generic skills in the core curriculum' (ICAA & CPA, 2009, p. 12). Interpersonal and team skills are explicitly identified, and group work is singled out as an appropriate method for teaching and developing these skills as well as other generic skills. Furthermore, 'comment is required on the skills developed'…[and] 'on the teaching approaches and assessment processes used,' (ICAA & CPA, 2009, p. 12). For this reason, Table 6.1 also highlights the extent to which explicit comment is made in the unit outline about the development of team work and/or interpersonal skills.

Each of the units examined in this study included a standard institutional based format to describe the graduate attributes developed. Notably, two institutions (Uni A and Uni E), made no claim about the development of team work skills (in the generic attributes statement or in the unit learning outcomes), despite the use of group work tasks. Similarly, only one unit at Uni C and two units at Uni F, explicitly stated that teamwork skills were a desired learning outcome. Although no statistical inferences can be made from such a small sample, it is interesting to note that only half of the accounting schools surveyed for this study (and 50% of the 34 units using group work), claim to be

[48] For accreditation purposes, auditing and taxation are only required by Chartered Accountants and not CPA Australia (CPA & CAANZ, 2015; CPA & ICAA, 2012; ICAA & CPA, 2008; 2009).

developing group/team work skills for their accounting graduates. In fact, where some fail to mention the development of teamwork skills at all, others (see for example Uni G), refer to how teamwork skills were taught and practised within the tutorial structure of almost every unit, suggesting that the development of this skill set is the focus, rather than specifically focusing on assessing that development or learning outcome[49].

There appears to be wide dispersion in the frequency by which assessed group work activities are included in the accounting major units taught within accounting schools. According to the published unit outlines, only one of the 12 accounting units, offered at Uni A, included group work activities. At the other end of the spectrum, all accounting units at Uni B used, and assessed, group work tasks within their units. Although some unit outlines offer additional information about the nature of the group task, in all cases (at all institutions), specific details of assessment criteria were not provided in unit outlines, therefore an evaluation of what is being assessed could not be made. However, including 'business law' units, where these were delivered by accounting schools, a total of 38% of accounting units assess group work tasks in some way. The weighting of group work tasks varies from 10% to 35% in the majority of cases, with one unit (a financial management type unit at Uni C), allocating the full 100% overall mark for the unit to group work based activities.

This preliminary analysis of unit outlines shows that the nature of the group work tasks also varies, albeit within a limited range of options. Interestingly, the structured forms of cooperative learning and TBL which feature in the accounting education literature do not appear in any of the sample unit outlines. Relying on the descriptions provided by the respective unit coordinators, all group work tasks take the form of either:

- a presentation (usually accompanied by a summarised handout of key points);
- the presentation of a major report (P&R);
- case studies;
- semester long projects;
- assignments (practical/technical or not detailed);
- poster (only in one unit).

[49] Non-assessed tutorial group work is shown in faded font in Table 6.1 to indicate where it has been mentioned in the unit outline. However, these activities have not been included in the overall count since it is likely many others use a similar strategy but have not included it.

Arguably, the terminology used for assessment tasks is likely to be overlapping and interchangeable. For example, a case study for one person may be referred to as a project for another, or simply an assignment for someone else. The key finding, however, is that there appears to be no consistent pattern in the way group work is utilised across universities, year groups, or subjects. One exception is the omission of assessed group work tasks in all law based units, delivered by accounting schools, i.e. taxation law, commercial law, and/or corporate law. Analysing the data between groups also suggests that individual accounting schools have a tendency to favour a particular approach to group work, and notably all appear to differ. For example:

- Uni A – Very little; no graduate attribute or learning outcome for teamwork;
- Uni B – All accounting units include group work (law units taught by law school);
- Uni C – Use group work but not to develop team skills; the only unit to mention teamwork learning outcome was auditing where it was only used in non-assessed tutorials;
- Uni D – Used once in 1st year and once in 3rd year;
- Uni E – Focus on presentation of reports in 3rd year; nothing in 1st year;
- Uni F – Extensive use of group work with 2 part-assignments;
- Uni G – Consistent. All 20% weighted. Only non-assessed tutorial group work in 3rd year units;
- Uni H – No assessed group work in 3rd year.

6.1.1 Changes over time

The anomalous situation with Uni A having only one unit using group work in 2009 was investigated further through a longitudinal analysis of the accounting unit outlines at that institution over a five year period (2009 - 2013 inclusive). While it was beyond the scope of this study to fully investigate the effect of changing structures and pedagogies over time, particularly in relation to learning outcomes in accounting, the results of this exploratory examination confirm the earlier assumption of continuous change in a number of units. At the same time it also signalled long term stability, and very little variation in other units. Further analysis of unit outlines at other institutions over a number of years verified that the extent and use of group work in accounting is more likely related to the choices made by individual academics, although at one institution (as

discovered during the academic interview phase), individuals do not have that degree of autonomy and the integration of group work is part of an overall university strategic plan.

In summary, the preliminary analysis of accounting unit outlines supports the need for further investigation into the group work phenomenon in accounting education. An interview with unit coordinators and other academic teaching staff would facilitate a better understanding of their conceptualisations and use of group work in teaching accounting units. In addition, it would help to verify and/or identify possible reasons for the differences found between the universities (Adler & Milne, 1997a). Since it is evident that universities vary quite considerably in the extent and ways in which they utilise group work activities in their accounting units, these between-groups differences also support the research design plan for the current study to use a case study approach and maximum variation sampling (as outlined in Chapter 4).

6.2 Demographic characteristics of academic participants

Following the analysis of archival data presented in unit outlines, the academic teaching staff were interviewed. In total, 23 accounting academics, from six different universities across Australia, voluntarily participated in the semi-structured interview survey of their perceptions and experiences of group work in accounting education. The sample comprised 16 unit coordinators, and seven other teaching staff. Of the seven additional staff members (who were drawn solely from the final three case study sites), four were also unit coordinators in their own right (in other units). Although this purposive sampling technique, employed in the current study, focused mainly on contacting coordinators of the targeted units analysed above, it yielded a wide-range of participants in terms of age, experience and level (see Table 6.2).

Table 6.2, panel A shows that academic levels are clearly not an indicator of assigned teaching responsibilities, with level A academics (associate lecturers) coordinating third year units across multiple campuses, having the same coordination and teaching responsibilities as their counterparts at level D (associate professors). Tutors also ranged in levels from recent graduates teaching as part-time sessional staff to level E (professors), with over 30 years' academic experience.

The total sample number is too small to show statistical similarities and/or variances; however, for the quantitative analysis it is important to note that for each demographic variable, participants are clustered around common characteristics. The total column in Table 6.2 shows the majority of participants are level B & C academics

Table 6.2 Demographic characteristics of academic participants

Variables	Unit coordinators		Tutor/UC		Tutor only		Total	
	n	%	n	%	n	%	n	%
Panel A:								
Academic position								
Associate lecturer (A)	2	12.5		-			2	8.7
Lecturer (B)	7	43.8	2	50.0			9	56.3
Senior lecturer (C)	5	31.3		-			5	21.7
Assoc. professor (D)	2	12.5		-			2	8.7
Professor (E)		-	2	50.0			2	8.7
Casual/sessional (P/T)		-		-	3	100.0	3	13.0
TOTAL	**16**	**69.6**	**4**	**17.4**	**3**	**13.0**	**23**	**100.0**
Panel B: Gender								
Male	10	62.5	3	75.0	1	33.3	14	60.9
Female	6	37.5	1	25.0	2	66.7	9	39.1
Panel C: Age								
29 years or younger		-		-	2	66.7	2	8.7
30 – 44 years	3	18.8	1	25.0	1	33.3	5	21.7
45 – 64 years	13	81.3	3	75.0		-	16	69.6
Panel D: Experience								
Years in industry								
Less than 1 year	1	6.3	1	25.0		-	2	8.7
1 – 5 years	2	12.5		-	2	66.7	4	17.4
6 – 10 years	6	37.5		-		-	6	26.1
More than 10 years	7	43.8	3	75.0	1	33.3	11	47.8
Years teaching (all sectors)								
Less than 1 year		-		-		-		-
1 – 5 years	1	6.3		-	2	66.7	3	13.0
6 – 10 years	6	37.5		-		-	6	26.1
More than 10 years	9	56.3	4	100	1	33.3	14	60.9
Teaching qualification								
Yes	6	37.5	1	25.0		-	7	30.4
No	10	62.5	3	75.0	3	100.0	16	69.6
Cert. 4 in training		1						1
Certificate of teaching		1						1
Diploma of teaching		2						2
Graduate diploma of ed.		1		1				2
Master of education		1						1
Total teach. qualifications		6		1		0		7

(78.0%). There are more males (60.9%); most participants are aged between 45-64 years (69.6%); and the majority have more than 10 years' teaching experience (60.9%).

Panel D lists the different types of formal teaching qualifications held by 30.4% of the survey participants. The majority (69.6%) have no formal teaching qualifications. When the data file is split on gender, 66.7% of all female participants, and 71.4% of all male participants, indicated that they were a level B or C academic, aged 45-64, with no formal teaching qualification. Slightly fewer males (57.1%) have over 10 years' teaching experience, but consistently 66.7% of female respondents share a common longevity in

the education sector. Notably at either end of the academic status spectrum, the only two level A academic participants are female, while the two professors are male.

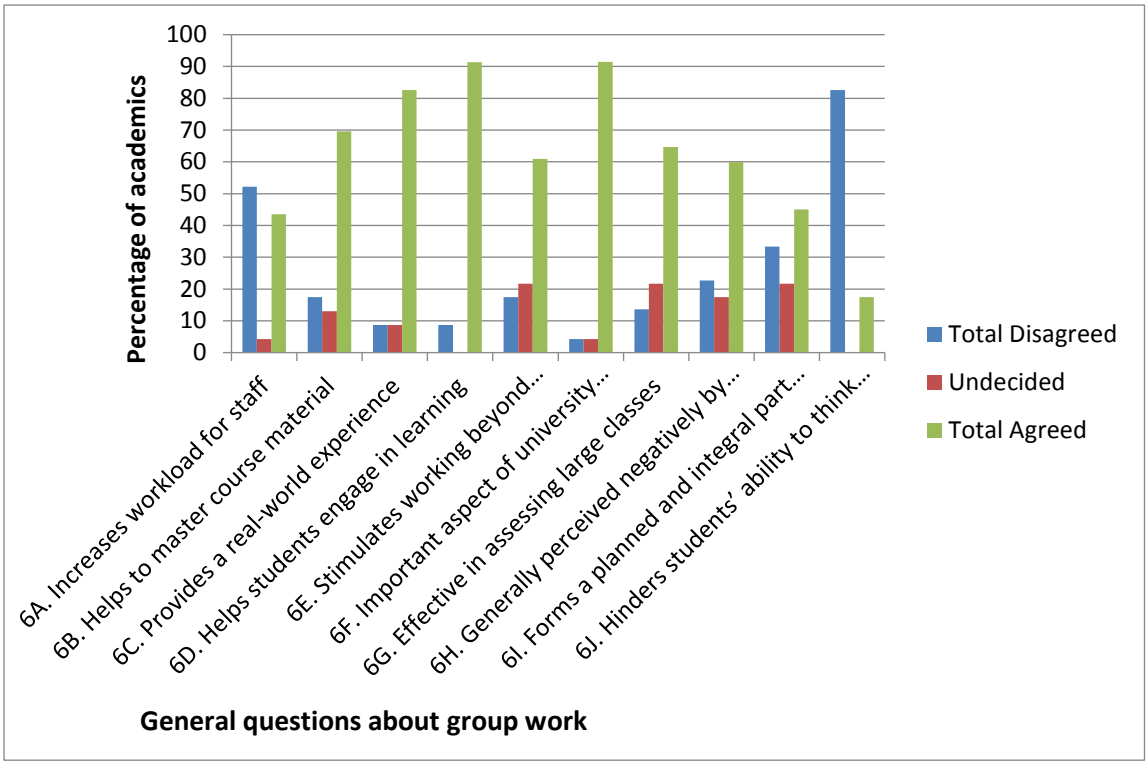
These descriptive statistics simply highlight the attributes of academic participants in the current study and say nothing about non-respondents or the population of accounting academics generally. Nevertheless, these results do bear a striking resemblance to the contemporary profile of the Australian academic workforce, where prior literature lists key defining elements as: the disproportionate number of academics aged 45 – 64 years (Bradley, Noonan, Nugent & Scales, 2008; Coates et al., 2009; Hugo, 2005; Hugo & Morriss, 2010); and the disparity in gender, with women being under-represented in numbers (Hugo, 2005), and senior positions (Kahn, 2012; Winchester, Shard, Browning & Chesterman, 2006). Demographic attributes are also potentially important to the current study, since de la Harpe et al. (2009) found a significant relationship between the demographic characteristics of 1064 academic staff at 16 Australian universities and their approaches to the development of graduate attributes (including teamwork). Specifically, differences were found across 'gender, teaching qualifications, teaching experience, and employment status' (de la Harpe et al., 2009, p. 24). The following section will discuss the indicators of demographic influence in the current study, as part of the quantitative analysis of the academic survey data collected.

6.3 Quantitative analysis of survey responses

To analyse the quantitative data collected from academics, responses to the individual question items within each 'rough scale' (de Vaus, 2002), were first examined, using basic descriptive analysis, and key inferential statistics to assess any significant differences between various groups. The loosely configured areas of interest, devised to explore Research Questions 1, 2, and 4, included:

- Question 6: General questions about group work (10 items);
- Question 8: Procedural questions about how academics conduct group work activities (10 items);
- Question 9: Process questions about academics' perceptions of what students do (13 items);
- Question 10: Motivations for using group work (5 items);
- Question 27: Influences on the choice to use group work (14 items).

Figure 6.1 Frequency of academic responses to general group work questions



6.3.1 General questions about group work

Figure 6.1 provides a summary of frequencies for the first group of Likert-type questions in the academic survey, presented at question 6. These questions related to general aspects of group work and were measured on a 7-point Likert scale (where 1 = very strongly disagree, to 7 = very strongly agree).

Given the small sample size (23), the large number of variables, and the 7 levels of measurement, the measurement categories were initially combined into a trichotomy comprising: total disagreed, undecided, and total agreed. This helps to make the presentation more readable and any patterns more obvious (de Vaus, 2002). Overall, academics agreed with most of the statements posed at question 6. Notably, the greatest level of agreement related to the belief that group work helps students engage in their learning (Q6d), χ^2 (3, N = 23) = 12.652, p = .005, and that group work is an important aspect of university learning (Q6F), χ^2 (4, N = 23) = 15.043, p = .005, (91.3% and 91.4% respectively). Group work's provision of a 'real-world experience' for students (Q6c) (82.6%), was the third most frequently agreed upon statement in question 6, although it was not statistically significant (p = .052). Likewise, there was general disagreement that

group work was a hindrance to a student's ability to think and act independently (Q6j) (82.6%), but again this was not statistically significant (p = .088). The implications for staff workloads were not as clearly delineated, with 52.2% disagreeing overall, that group work increases workload for staff, while 43.5% agreed that it added to workloads.

Measures of central tendency, based on the original 7-point Likert scale measures, supported the combined frequencies of the trichotomy. Table 6.3 presents the frequency table for central tendency and variation in the question 6 items. The mode represents the most frequent response to each question, however since the Likert-type questions are ordinal, de Vaus (2002) argues that the median is the preferred measure of central tendency, because the mode is less stable and dependent on how categories are combined or collapsed, although notably, the wider the range, the less adequate is the median measure (de Vaus, 2002). In this instance, the mid-point (median) in the range of responses (1-7), is for the most part, the same as the most frequent response (mode). This has occurred despite the responses being dispersed across the full range, from those who strongly disagreed or very strongly disagreed, to those who very strongly agreed, for all except Q6d (helps students engage) and Q6c (a real-world experience), where there is less variation across the sample. The variation ratio provides an appropriate snapshot of the degree of difference that exists across the 7-point Likert-type question items in question 6. As shown in Table 6.3, only one item, '6D. Helps students engage in learning' (Q6d), has a variation ratio below 50% (44%). This means that for all other items more than half the participants' responses were not within the modal category indicated as being the most frequent. de Vaus (2002, p. 223) warned that 'the more variation there is

Table 6.3 Academics' responses to general aspects of group work

	N	Median	Mode	Min.	Max.	Var. Ratio
6A. Increases workload for staff	23	3.0000	3.00	1.00	7.00	0.65
6B. Helps students to master course material	23	5.0000	5.00	2.00	7.00	0.65
6C. Provides students with a real-world experience	23	6.0000	6.00	3.00	7.00	0.57
6D. Helps students engage in their learning	23	6.0000	6.00	3.00	7.00	0.44
6E. Stimulates students to work beyond minimum requirements	23	5.0000	5.00	2.00	7.00	0.74
6F. Is an important aspect of university learning	23	6.0000	6.00	2.00	7.00	0.57
6G. Is an effective way of dealing with assessing large classes	22	5.0000	6.00	2.00	7.00	0.70
6H. Is generally perceived negatively by students	22	5.0000	5.00	1.00	7.00	0.65
6I. Forms a planned and integral part of the whole course in which teamwork skills are developed incrementally	21	4.0000	5.00	1.00	7.00	0.74
6J. Hinders students' ability to think and act independently	23	2.0000	2.00	1.00	6.00	0.61

in a sample the less well the averages summarises the sample'. These preliminary results suggest, that for this sample of academics, they are consistent in the direction of their responses, that is they agree (and disagree) in general, with the broad statements about group work, however the extent or degree of their perception differs. To further analyse these differences, bivariate and multivariate tests were conducted.

6.3.1.1 Bivariate analysis

A cross-tabulation table and a Pearson's chi-square test of contingencies ($\alpha = .05$), with exact statistics, to account for the small data set, and the sparsely populated cross tabulation cells (Mehta & Patel, 2012), was examined to further analyse the question 6 items. They were first assessed for potential relatedness to the demographic characteristics of the respondents, and secondly to the extent to which academics used group work in their teaching of accounting (Q7).

The initial outcome of the cross-tabulation and chi-square tests showed that for each of the question 6 Likert-type items, the expected frequency assumption, that stipulates 'no more than 20% of the expected cell frequencies should be lower than five' (Allen & Bennett, 2012, p. 229), was violated. This was a limitation associated with the small sample size. However, Mehta and Patel (2012, p. 16) argue that the 'at least 5' rule is 'unnecessarily conservative' for cross-tabulations and non-parametric tests. They propose that in these circumstances the Exact test or Monte Carlo two-sided *p* value, should be used, as they 'provide a powerful means for obtaining accurate results when your data set is small…or the data fail to meet any of the underlying assumptions necessary for reliable results using the standard asymptotic method' (Mehta & Patel, 2012, p. 1). The justification is that, by default, SPSS calculates statistics using the asymptotic method, and therefore assumes the data are of a sufficiently large sample size to fit a particular distribution. With small sample sizes, it is therefore 'preferable to calculate a significance level based on the exact distribution of the test statistic' (Mehta & Patel, 2012, p. 1).

The subsequent cross-tabulation, using the exact test option in SPSS, found a marginally significant association between the academics' years of teaching experience in universities, and their perception that group work helps students engage in learning, χ^2 (33, $N = 23$) = 47.622, $p = .048$, exact $p = .025$. Specifically, 100% of those with 10 to 15 years' experience (30% of the sample group) either strongly or very strongly agreed that

Table 6.4 The extent to which academics use group work in their teaching

Question 7	Frequency	Percent	Cumulative Percent
Rarely	1	4.3	4.3
Occasionally	3	13.0	17.4
Often	10	43.5	60.9
Always	9	39.1	100.0
Total	23	100.0	

group work aids engagement in learning. Those with twice as long a service record (30 years) disagreed with the statement. Although these individuals represented only 9% of the sample population, they were also the only academics to disagree with the statement.

Assessing the influence of dichotomous demographic variables, gender, and teaching qualifications, respectively, a Mann-Whitney *U* test indicated that female academics were significantly more likely to rank group work as an important aspect of university learning (*Mean Rank* = 15.78, n = 9), than their male counterparts (*Mean Rank* = 9.57, n = 14), $U = 29.00$, $z = -2.290$, $p = .022$, two tailed, with an exact $p = 0.21$ (2-tailed). For the question 6 items, there was no indication that having a formal teaching qualification influenced responses. Interestingly, however, the extent to which group work was used (question 7) was significantly higher for academics without a formal teaching qualification (*Mean Rank* = 14.31, n = 16), than those with a qualification (*Mean Rank* = 6.71, n = 9), $U = 19.00$, $z = -2.670$, $p = .008$, two tailed, and an exact $p = .007$.

Table 6.4 shows that only 17.4% of the respondents rarely or only occasionally used group work in their teaching. The majority (82.6%) suggested that they often or always, used group work, which should be expected given the purposive sample of accounting academics currently using group work in their teaching. Not surprisingly this result was statistically significant, χ^2 (3, $N = 23$) = 10.217, $p = .017$, exact $p = .015$.

However, 94% of academics without a teaching qualification were included in that statistically significant majority, compared with 57% of those who indicated they held a teaching qualification. For the question 6 items, there were no significant relationships between the ten general perceptions of group work listed in question 6 and the extent to which group work was used.

6.3.2 Group work techniques used

In the accounting subjects that they teach, the sample group of academics surveyed were significantly similar in their pedagogical approaches to group work. Measured on a 5-point Likert scale (never, rarely, occasionally, often, always), the items in question 8

focused on the group work processes and techniques used by accounting academics. Notably, many of the items in question 8 were only relevant for the unit coordinators, who devise and structure the group work activities for their respective units.

Most frequently, the respondents said they always assess group work (or more accurately, the product of group work); and they always allow students to select their own work groups (Mo = 5 respectively). However, as shown in Table 6.5, most of the respondents never:

- incorporate an individual assessment task into the group work activity;
- allocate students to groups based on certain characteristics eg. gender; age; ethnicity;
- have a diverse mix of students within a group;
- have the same student teams working together on various tasks throughout semester;
- precede group work tasks with specific teamwork preparation activities;
- use a contract type agreement between group members; or
- teach teamwork skills.

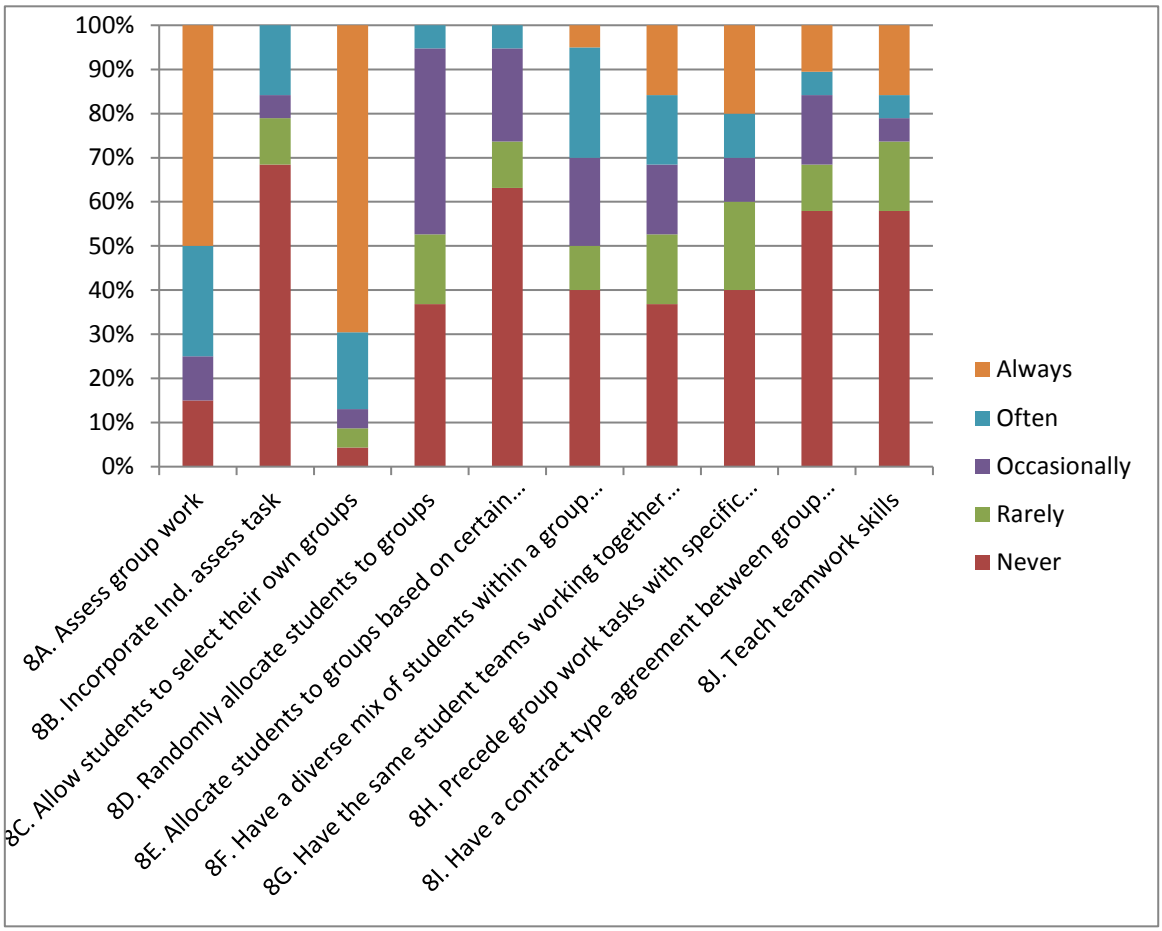
A chi-square goodness of fit test (α = .05) found these frequencies were statistically significant for five items, namely: no individual assessment tasks, χ^2 (2, N = 19) = 12.333, p = .002, exact p = .003; self-selection of groups, χ^2 (4, N = 23) = 25.333, p < .001, exact p = < .001; not allocating based on characteristics, χ^2 (3, N =19)=13.556, p = .004, exact p = .003; no contracts or agreements between group members, χ^2 (4, N = 19) = 14.778, p = .005, exact p = .006; and most frequently, accounting academics do not teach teamwork skills, χ^2 (4, N = 19) = 15.333, p = .004, exact p = .004. Notably, on each occasion the asymptotic p value is almost identical to the more reliable exact p value, suggesting that the limited sample size did not impact these results.

Table 6.5 Frequency of group work techniques used by accounting academics

	N	Median	Mode	Min.	Max.	Var. Ratio	Exact Sig.
8A. Assess group work	20	4.5000	5.00	1.00	5.00	0.50	.141
8B. Incorporate Ind. assess task	19	1.0000	1.00	1.00	4.00	0.32	.003*
8C. Allow students to select their own work groups	23	5.0000	5.00	1.00	5.00	0.30	.000**
8D. Randomly allocate students to groups	19	2.0000	3.00	1.00	4.00	0.58	.106
8E. Allocate students to groups based on certain characteristics eg gender; age; ethnicity;	19	1.0000	1.00	1.00	4.00	0.37	.003*
8F. Have a diverse mix of students within a group (eg.abilities; gender; age; ethnicity)	20	2.5000	1.00	1.00	5.00	0.60	.435
8G. Have the same student teams working together on various tasks throughout semester	19	2.0000	1.00	1.00	5.00	0.63	.415
8H. Precede group work tasks with specific teamwork preparation activities	20	2.0000	1.00	1.00	5.00	0.60	.358
8I. Have a contract type agreement between group members	19	1.0000	1.00	1.00	5.00	0.42	.006*
8J. Teach teamwork skills	19	1.0000	1.00	1.00	5.00	0.42	.004*

Figure 6.2 provides a graphic display of the extent to which these results are strengthened further, when the measurement categories are combined. For example: 87% of respondents often or always allow students to select their own groups; while 79% never or rarely include individual assessment tasks; only 5% will often allocate groups based on characteristics, and no-one indicated that they use that allocation procedure all the time; 17% use contracts or some type of agreement for group work; and 74% never or rarely teach teamwork skills. Significantly, in a related question (Q26), 81% of those who have responsibility for other teaching staff in their unit, never or rarely, provide training or other specific team-based resources for the other teaching staff in their unit. Twenty-three percent of these respondents suggested that the question was not applicable, as all teaching staff should be responsible for their own training and/or professional development in this area.

Figure 6.2 Group work strategies used by accounting academics



6.3.3 Perceptions of students' group work processes

Question 9 comprised 13 items, measured on a 7-point scale that asked academics to indicate how strongly they agreed or disagreed with statements about group work processes, specifically, their perceptions of what students do, and the processes they observed in students. For 8 of the 13 items, academics generally agreed with the following statements (Mdn = 5; Mo = 5):

1. Groups simply divide up the work (exact $p = .015$)[*50];
2. Group work promotes collegiality (exact $p = .008$)[*];
3. Dominant individuals tend to take control (exact $p = .803$);
4. It's difficult to find mutually convenient meeting times (exact $p = .075$);
5. Group work encourages responsibility for own learning (exact $p = .030$)[*];
6. It's difficult to reliably monitor and evaluate group processes (exact $p = .110$);
7. Individuals tend to rely on the lecturer to confirm the group's treatment of a problem (exact $p = .351$);
8. In most cases teamwork learning objectives are met (exact $p = .600$).

Furthermore, they disagreed that group members have difficulties keeping track of all ideas and information contributed (Mdn = 3; Mo = 3; exact $p = .038$[*]); and were generally undecided whether it was more equitable to assess individuals rather than groups (Mdn = 4; Mo = 4; exact $p = .400$), and whether or not students spend more time on group tasks than they would if working alone (Mdn = 4; Mo = 4; exact $p = .091$). The strongest agreement was reserved for two variables that appear to sum up the key issues for group work in accounting education: (1) that more ideas are generated when working in a group (Mdn = 6; Mo = 6; exact $p = .001$[**]); and (2) some group members participate more than others (Mdn = 6; Mo = 7; exact $p = .803$), although notably the perception of participation was not statistically significant.

A cross-tabulation and Pearson's chi-square test of contingencies ($\alpha = .05$), with exact statistics, was conducted to examine whether or not the responses to question 9 items were related to the demographic characteristics of academics. There was no significant difference found, when tested on gender, age, academic level, and teaching experience. However, there was a marginally significant result (where $\alpha = .10$), for academics with no formal teaching qualification, who perceived that individuals tend to

[50] The statistically significant results, as verified with a chi-square goodness of fit test, are denoted by asterisks ([*]$p < .05$; [**]$p < .005$).

rely on them to confirm the treatment of the group's problem, χ^2 (3, N =21)= 7.463, p = .059, exact p = .051.

6.3.4 The principal components of group work processes

Notably, the question 9 items followed a similar line of questioning to the items in question 6, thereby extending the number of variables related to students' group work processing to a total of 23 Likert-type question items. Given the similarity of the questions, responses to individual items were expected to be correlated. Therefore, to better understand the key aspects of group work, from the perspective of the accounting academics in the current sample, a principal components analysis (PCA) was performed on the combined group of questions in question 6 and question 9. PCA is an efficiency tool designed to reduce the number of variable dimensions to a smaller set of principal components. This 'smaller set of scores are linear combinations of the original measured variables' (Fabrigar & Wegener, 2012, p. 31).

Using pairwise deletions, and a Varimax rotation, seven reduced dimensions (with Eigenvalues exceeding 1), together accounted for 81.77% of the total variance in the data (as shown in Table 6.6). The SPSS rotated component matrix, shown in Table 6.7, presents the seven principal components extracted from the Likert-type responses to the question 6 and question 9 items. Since the percentage of explained variance is an indicator of goodness of fit for the extracted components, and the higher, the better (de Vaus, 2002), this outcome suggests a strong solution has been extracted.

As the aim of PCA is to reduce the dimensions of the data set, focusing on the key components of group work processes, as identified in the responses to questions 6 and 9, variables with coefficient loadings of less than 0.5 were suppressed (Coakes et al., 2009).

Table 6.6 Total variance in perceptions of group work processes explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.626	33.158	33.158	7.626	33.158	33.158	4.276	18.593	18.593
2	2.888	12.557	45.715	2.888	12.557	45.715	3.258	14.167	32.760
3	2.440	10.609	56.325	2.440	10.609	56.325	2.794	12.146	44.906
4	1.655	7.195	63.520	1.655	7.195	63.520	2.684	11.669	56.575
5	1.551	6.745	70.265	1.551	6.745	70.265	2.232	9.703	66.279
6	1.415	6.150	76.415	1.415	6.150	76.415	1.960	8.521	74.800
7	1.232	5.356	81.771	1.232	5.356	81.771	1.603	6.971	81.771
8	.958	4.164	85.936						

Extraction Method: Principal Component Analysis.

Table 6.7 Rotated Component Matrix[a] on perceptions of 23 group work processes

	Question 6 (10 items) and Question 9 (13 items)	Components						
		1. Learning α = .825	2. Difficulties α = .746	3. Individualism α = .793	4. Efficiencies α = .685	5. Negativity α = .677	6. Skills α = .702	7. Coordination α = .572
C1	6D. Helps students engage in their learning	.848						
	9H. Group work encourages students to take responsibility for their own learning	.818						
	9F. More ideas are generated when working in a group	.747						
	6F. Is an important aspect of university learning	.710						
	6E. Stimulates students to work beyond minimum requirements	.628						
	9L. In most cases teamwork learning objectives are met	.577						
C2	9I. It's difficult to reliably monitor and evaluate group processes		.882					
	9C. Some group members participate more than others		.796					
	9G. It is difficult for students to find a mutually convenient time to meet		.744					
	6I. Forms a planned and integral part of the whole course in which teamwork skills are developed incrementally		-.700					
C3	9M. It's more equitable to assess individuals than groups			.783				
	9A. Groups simply divide the work between individuals rather than working collaboratively			.734				
	9D. Dominant individuals tend to take control of discussions in ways that limit the contributions of other group members?			.732				
C4	6G. Is an effective way of dealing with assessing large classes				.742			
	6C. Provides students with a real-world experience				.703			
	6A. Increases workload for staff				-.686			
	9K. Students tend to spend more time on group tasks than they would if working alone				-.582			
C5	6H. Is generally perceived negatively by students					.865		
	9B. Group work promotes collegiality within the class					-.650		
C6	6J. Hinders students' ability to think and act independently						-.930	
	6B. Helps students to master course material					-.554	.610	
C7	9E. Group members report difficulties keeping track of all ideas and information contributed							.824
	9J. Individuals tend to rely on the lecturer/tutor to confirm the groups' treatment of a problem							-.735

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax
a. Rotation converged in 20 iterations.

Furthermore, although PCA is not dependent on the communality estimates of the measured variables (Fabrigar & Wegener, 2012), the communality values for the current data set of 23 variables, ranges from 0.596 to 0.936, with an overall average of 0.818, providing additional evidence that there is sufficient variance to support the extracted components. Communalities with an average of .70 or more are considered to be high, and therefore optimal for factor analytic procedures (Fabrigar & Wegener, 2012). Fabrigar and Wegener (2012) further suggest that when high communalities are combined with factors that are 'overdetermined (at least three to five measured variables with substantial loadings on each factor), good estimates can be obtained with comparatively small sample sizes' (p. 26). In the current data set, component six and seven are the only ones limited to two loading variables. However, since this is an exploratory analysis, the focus is the extraction of principal components, not underlying factors; the reliability of each composite score is respectively supported by an adequate Cronbach's alpha statistic (as presented in Table 6.7) (Schmitt, 1996); and the construction of each component makes logical sense (Fabrigar & Wegener, 2012); the total number of components, as extracted, is retained in full. Furthermore, the inclusion of all 23 variables, with only one double loading item, enhances the interpretability of the data set, and results in a more compelling outcome (Fabrigar & Wegener, 2012).

The variable loadings for each of the seven components are set out in Table 6.7. Component one is labelled 'learning', since the common feature in each variable is the reference to how group work enhances student learning, comprising a total of six single-loading variables, namely: helps students engage in their learning; encourages students to take responsibility for their own learning; more ideas are generated in groups; it is an important aspect of university learning; it stimulates students to work beyond minimum requirements; and in most cases, teamwork learning objectives are met. This component accounts for the greatest variance in the data, at 33%. Component two highlights the inherent difficulties to which the respondents related. These included four variables that loaded strongly from .700 to .882. The 'difficulty' variables include: being able to reliably monitor and evaluate group processes; inequities in participation; finding mutually convenient times to meet; and finally, the negatively loaded 'forms a planned and integral part of the whole course', which means respondents disagreed with that statement and viewed it in the same way as other difficulties associated with group work, specifically,

that it is difficult to develop teamwork skills incrementally because it tends not to be part of an overall planned and integral part of the whole course.

Interestingly the third component, labelled 'individualism' is perceived as something quite separate to the other aspects of group processes. Three variables load strongly, and singularly (.732 to .783) onto this component, with Cronbach's alpha of .793, also attesting to its internal consistency. Contrary to what the literature says should happen, academics have clearly identified the reality of an individualistic component, where, in some cases, it is more equitable to assess individuals rather than groups; that groups simply divide the work between individuals, rather than working collaboratively; and that dominant individuals tend to take control and limit the contribution of other individuals.

In direct contrast, academics also recognise the efficiencies associated with group work. Four singularly loading variables make up the 'efficiency' component (C4 in Table 6.7), with two positive and two negatively signed coefficients. In combination, what it suggests about group work is that: it is an effective way of dealing with large classes; provides students with a real-world experience; and is more efficient for both staff and students, in terms of less workload, and time spent on tasks.

Components five and six share the only cross-loading variable in this model. Conceptually, the way in which academics perceive that 'group work helps students to master course material' (Q6B), is split. As part of component five, which has been labelled 'negativity', to account for the negative perspectives of group work that persist, it is understandable that 'helping to master course material' would load negatively (-.554), meaning that for the 'negative' component, group work is seen as not helping students to master the work. In the same way it is perceived to not promote collegiality within the class (-.650), and is generally perceived negatively by students (.865). Component six however has a skills focus, and therefore the cross-loading variable is logical and interpretable because it suggests that group work is also perceived to help students master course material, particularly when viewed from a skills perspective. In addition, the skills component suggests that group work does not hinder students' ability to think and act independently (-.930).

Finally, component seven (coordination), loads strongly with 'group members report difficulties keeping track of all ideas and information contributed' (.824), and the negatively signed 'individuals tend to rely on the lecturer/tutor to confirm the group's

treatment of a problem', (-.735) which is interpreted as individual members do not generally approach the lecturer for matters concerning the coordination of ideas and solutions. Notably the descriptive statistics reported in section 6.3.3 suggested that academic participants most often 'agreed' (Mo = 5) regarding students' reliance on their input to a problem. At first this appears contradictory, however, the frequency distribution was not statistically significant, and PCA is not a measure of performance, but rather it seeks to 'account for common and unique variance in a set of variables' (Allen & Bennett, 2012, p. 205). Therefore, component seven, which is the final and weakest of the extracted components in the PCA, accounting for only 7% of the variance in the data, highlights that academics perceive a correlation between student groups who struggle with the coordination of information and those who do not seek help from the lecturer/tutor. Conceptually and statistically, the relationship makes sense and therefore adds value to the overall PCA solution.

In summary, the seven components extracted in the PCA represent a concise description of the key elements of group work as perceived by the responses to questions 6 and 9 in the academic survey. Those key components were identified as: learning; group work difficulties; individualism; efficiencies; negativity; skills; and coordination.

6.3.5 Motivations and influences on group work usage

To explore what factors contribute to staff conceptions (RQ4), question 10 used five items to help establish the key motivators, and therefore the main purpose, for academics using group work in the teaching of accounting. The importance of each item was measured on a 5-point Likert scale, from 1= not important at all, to 5 = very important.

Initial observations of central tendency suggested that all five items were considered important (Mdn = 4; Mo = 4). However, further investigation suggested that some items were statistically more important than others. A chi-square goodness of fit test ($\alpha = .05$) found that using group work: to model workplace experiences, χ^2 (4, N = 23) = 11.565, p = .021, exact p = .021; and to specifically develop generic team skills, χ^2 (4, N = 23) = 10.565, p = .014, exact p = .014; were rated as significantly more important than the other listed purposes, such as managing workloads (exact p = .132), developing other types of generic skills (exact p = .098), and developing discipline knowledge and skills (exact p = .067).

Towards the end of the questionnaire, Question 27 also aimed to measure the factors that influenced accounting academics' choice to use group work activities in their teaching. Following similar questioning to de la Harpe et al. (2009), the fourteen Likert-type items in question 27 (listed in Table 6.8) found that assessment led the list of motivators for academics. For the majority of the respondents (75%), their willingness to assess group work had a significant or very high level of influence on their choice to use group work activities, closely followed by their level of confidence in assessing group work (70%).

Table 6.8 presents the influencing factors, in descending order, and summarises the percentage of respondents who indicated what factors were most influential in their decision to use group work tasks and/or activities. Notably, the chi-square test for goodness of fit, was statistically significantly for the factor with the most level of influence (willingness to assess group work), χ^2 (4, N = 20) = 11.500, p = .021, exact p = .023, and for the factor with the least level of influence, community expectations or views, χ^2 (4, N = 21) = 13.524, p = .009, exact p = .009. The placing of the second most influential factor, the level of confidence in assessing group work, was not statistically significant (exact p = .098). However, further examination of its relatedness to participants' demographic information found that academics with a formal teaching qualification were

Table 6.8 Summary of the most influential motivators for using group work in accounting

Factors with significant /very high levels of influence	N	Percentage (%) of respondents	Exact Sig. (2-tailed)
Willingness to assess group work	20	75%	0.023*
Confidence to assess group work	20	70%	0.098
Personal expectations or views	21	67%	0.058
Willingness to teach teamwork skills	19	63%	0.338
University's expectations	21	62%	0.174
Previous teaching experiences with group work	20	60%	0.311
Industry/employer expectation or views	23	57%	0.493
Confidence to teach teamwork skills	20	50%	0.215
School/Faculty's expectations	21	48%	0.301
Students' expectations or views	20	45%	0.554
Professional body/accreditation requirements	23	43%	0.298
Peer/colleagues expectations or views	20	40%	0.838
Workload	20	35%	0.098
Community expectations or views	21	14%	0.009**

*p < .05
**p < .01
Based on Chi-square test for goodness of fit

significantly more likely to rank their confidence to assess group work as a higher level influence (*Mean Rank* = 14.5, *n* = 7), than those without formal teaching certification (*Mean Rank* = 8.35, *n* = 13), *U* = 17.500, exact *p* = .028, two-tailed. Interestingly, the participants without formal teaching training ranked industry and employer expectations or views as a significantly higher influence on their choice of using a group work pedagogy (*Mean Rank* = 14.34, *n* = 16), than those with teaching qualifications (*Mean Rank* = 6.64, *n* = 7), *U* = 18.500, exact *p* = .009, two-tailed.

When the remaining academic demographic characteristics were tested for significant differences in responses, namely: gender, age, academic level, and university teaching experience, a Mann-Whitney *U* test indicated that female participants had rated their level of willingness to teach teamwork skills (*Mean Rank* = 13.81, *n* = 8) a significantly higher influence than the male participants (*Mean Rank* = 7.23, *n* = 11), *U* = 13.500, exact *p* = .007. On the other hand, males ranked 'managing workloads', (*Mean Rank* = 13.46, *n* = 13), in question 10, as significantly more important in relation to their motivation for using group work activities, than their female counterparts (*Mean Rank* = 7.00, *n* = 8), *U* = 20.000, exact *p* = .014, two-tailed.

6.4 Summary

This chapter presented the findings of the first two investigations in stage one of this exploratory study into group work in accounting education in Australia. It began with a content analysis of 90 accounting unit outlines, at eight Australian universities. Data collected from the unit outlines, and confirmed later in the academic interviews, suggested that although group work is perceived to be often used in accounting courses, the extent to which group work is used varies from institution to institution, and in combination was only used in 38% of the units examined. The types of group work utilised was limited to a selection of common approaches, involving simple unstructured and/or ad hoc arrangements and where students work together to prepare joint presentations, research reports, and/or tutorial work. Notably, only three units (0.03%) had an explicit teamwork learning outcome, while only half of the units using group work referred to the ongoing development of teamwork skills (19% of the total sample).

A quantitative analysis of the academic interview surveys followed. Interestingly, the sample participants closely resembled the profile of the contemporary Australian academic, and the majority had no formal teaching qualification. The analysis found that the general perception and experience of group work is shared across seven key

components, namely: student learning, difficulties, and negativity, individualism, efficiencies, skills, and coordination aspects. In addition, willingness to assess group work was identified as the most influential motivator for using group work, although significantly, female academics focused more on their willingness to teach teamwork skills, while their male counterparts were more influenced by the potential of group work to manage workloads.

The following chapter will further explore the perceptions and experiences of the 23 academics interviewed, through a qualitative analysis of their open-ended, and extended responses to survey items.

Chapter 7: Qualitative Analysis of Accounting Academics' Perceptions and Experiences of Group Work

7.0 Introduction

The qualitative data collected during the academic survey interviews are analysed in this chapter. Using mind map methodology (Miles & Huberman, 1994), section one presents a graphic display of the key themes identified from responses to the opening question about academics' initial thoughts on group work. It provides the focus for this chapter and underpins the exploration of Research Question 2, how do accounting academics perceive group work within the accounting curriculum?

Section two follows with an examination of the key aspects of successful group work, while section three will focus on the relevance of group work within the accounting curriculum. All qualitative data, including final comments, will be analysed together in section four. The fifth section summarises the chapter and highlights the overall key themes extracted from across each of the aforementioned sections, in which qualitative data was collected from 23 academic participants.

7.1 Initial thoughts about group work

Academics were first asked to share their initial thoughts when they hear the term 'group work'. As might be expected, there was a clear dichotomy in responses, between positive (61%) and negative thoughts (78%), as illustrated in Figure 7.1. Notably, these indicative percentages included six cross-loading responses where interviewees referred to both positive and negative aspects of group work, at the same time. For example:

> Initial thought is that as a teacher I love it, as a student I hated it. As a teacher I think it's good to get students working together. I think it's good to get them communicating, thinking together and I think it is an important skill even though every student I've ever had whinges about it (Rose – W3)[51].

Preliminary observations suggested that academics' initial responses were repeatedly confirmed and expanded upon throughout the survey interviews. This was again noted in the process of verifying the transcribed data. It is typical of a phenomenon known as the 'framing effect', which recognises that survey respondents use internal

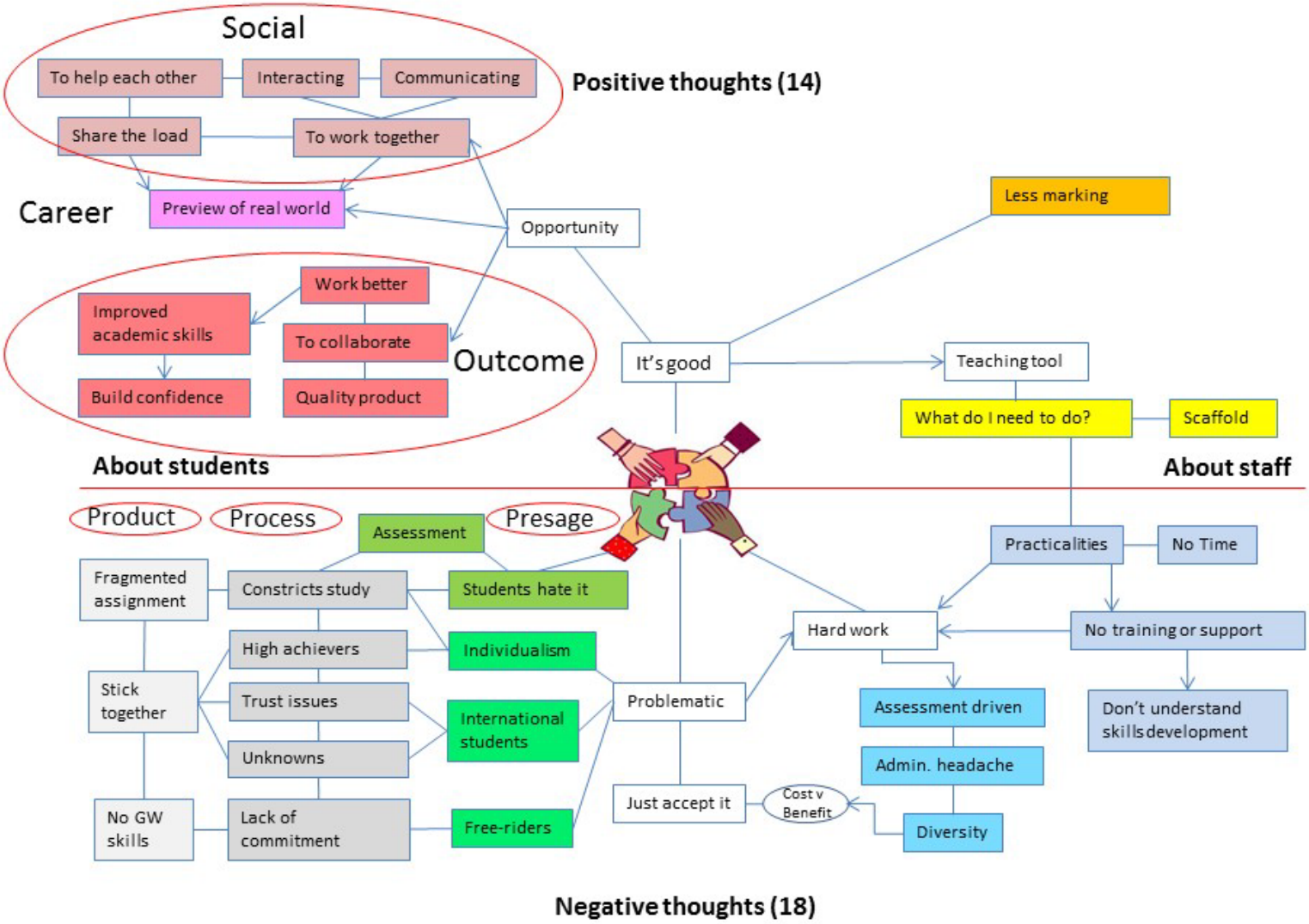
[51] For anonymity, pseudonyms have been used. Given the gender differences identified in the previous chapter, gender specificity has been maintained to enhance the interpretability of the extracts provided in this qualitative analysis.

decision frames on which to base their opinions (Stalans, 2012). The previous extract demonstrates that Rose's own experiences as a student may be influencing her perceptions now, as a teacher. Stalans (2012) suggests that decision frames, which are grounded in 'a web of beliefs, attitudes, values, and schemas' can become 'chronically accessible…through [the] repetition and habitual use of a decision frame' (p. 85). What is more, 'framing effects generally are not due to selective recall or ease of recall, but to the greater importance placed on considerations suggested in the frame or to selective attention to particular considerations' (Stalans, 2012, p. 87). Stalans (2012) highlights the need for researchers to be aware of the influence these framing effects have on respondents' opinions. Consequently, this chapter is anchored on the way in which academics framed their responses to the initial open-ended question.

As shown in Figure 7.1, the group of affirmative responses have emanated from the central idea that group work is 'good'. Thoughts related to perceptions of positive student outcomes and experiences (86%), on one hand, and positive staff experiences (14%), on the other. These are situated above the dividing line on the conceptual mind map devised from the data (Figure 7.1). Initial negative perceptions about group work are displayed below the line. The central theme here is that group work is problematic. Forty four percent of all respondents with negative perceptions focused on student characteristics, with just over half of this group (56%) being more concerned about the difficulties faced by teaching staff.

The use of the mind map in this analysis helps to envision and analyse the qualitative responses, and respective interrelationship between concepts, as derived directly from the transcripts (Miles & Huberman, 1994). Using colour to depict the key theme areas in each of the four domains (positive and negative thoughts about students; and positive and negative thoughts about staff), and interconnecting lines to represent the relationships expressed by the academics (Buzan & Buzan, 2000), Figure 7.1 therefore provides a visually oriented snapshot of the data (Dixon & Lammi, 2014). The following analysis will address each of the four domains in turn, working in a clockwise direction as presented in Figure 7.1.

Figure 7.1 Initial thoughts about group work: A mind map of accounting academics' responses



7.1.1 Group work is good for students

The over-riding theme for those with positive thoughts about group work for students is 'opportunity'. It is seen as providing opportunity for students in three main domain areas, labelled as:

1. social (helping; sharing the load; and interacting with new people);
2. career (providing a preview of the 'real world' in accounting); and
3. product/outcome (improved quality of assignments through collaboration).

Notably, there is little reference to the opportunity for knowledge transfer or content mastery within group work. Given the history of accounting education being criticised for its overly technical focus, this is a surprising result. It is feasible that content knowledge and deep learning outcomes are implicit in some of the responses, such as helping each other, and improving academic skills and outcomes, but nevertheless, this aspect is not as explicit as might be expected within a learning institution.

Those who initially conceptualised the social aspects of group work refer to socially oriented opportunities such as helping each other; sharing the workload; communicating with peers; being more engaged; interacting with new people; and coming together with familiar classmates. In fact, the social aspect is explicitly seen more as an opportunity to add an extra component to the learning environment, in addition to academic knowledge. For example:

> It's a good opportunity for students to work with each other. It's a chance to work with people that you wouldn't normally get a chance to work with…so it's like expanding their knowledge in more ways than just academically and I think it's a great opportunity for them (Mary - B5).

> I love it in the way that it's good to be able to see students interacting together… (Rose – W3).

For this group, the initial focus is centred on the positive aspects of socialisation, not necessarily in relation to any formal group work tasks or pedagogical strategies to teach and develop teamwork skills. Furthermore, the social aspect is distinct in the way that academics promote the informal nature of interactions in an ad hoc manner or as Martin describes below, accepting that students will naturally come together to help each other, even with individual assignments.

> Apart from the use in actual assessed work, major assignments, I like students to work together. Apart from that I've used it very informally in tutorials for example you know, just you guys talk amongst yourselves for a little while, that sort of thing,

> without building it in and having it as a regular routine in tutorial so students, you know, had expectations about exactly how to do that (Oscar – A3).
>
> Even if it's an individual assignment, I accept that students will work in a group and that's positive. It's very positive because if students help each other I think it will obviously help the one that needs help but it will also help the one that gives the help (Martin - A5).

Repeatedly, the social theme was linked to the transferability of skills beyond university, and the continuing benefits of improving interpersonal skills for the students' future careers in accounting. The accounting academics within the social domain expressed strong beliefs that group work skills in accounting education provided invaluable insight to the future, and a preview of what students can expect in the 'real' world of accounting. As illustrated in Figure 7.1, the 'real' world career perspective forms the second key theme identified in relation to academics' positive thoughts about group work for students. Group work is seen as the tool or context in which interpersonal workplace team skills can be developed. The following exemplars highlight the perceived interrelatedness of the social and career aspects of group work:

> I think that it's good in the way that as soon as they start to go into the work force it's going to become a really, really important tool for them to have to be able to communicate and work with other people, even if they don't want to (Rose - W3).
>
> Group work is important. Teamwork is important for accountants, particularly in tax… it's a skill they have to develop because in the workplace they will have to work as a team. So basically to develop those teamwork skills, group work is an important part to develop those teamwork skills (Martin - A5).
>
> I'm thinking about when students leave uni and they go out in the workforce they are going to be put into groups that may not be of their choosing or may not be with people who they would really prefer to work with but they have to anyway. I think it's a great chance for them to learn these skills that can transfer beyond university to get a job done, sharing the load (Mary - B5).

There appears to be an expectation however, that students will learn teamwork skills by merely interacting with others or working together in a group. The following extract alludes to the conception that teamwork skills are transferred from this abstract mechanism called 'group work' to the students. The key phrases about group work are that 'it makes them learn' about others; 'it gives them skills'; and 'it teaches them'; although notably it does not teach them about discipline knowledge and content. Theoretically from this transmission perspective, the teacher would be the knowledge

expert who expounds the technical accounting content (Biggs, 2003; Martin, Prosser, Trigwell, Ramsden & Benjamin, 2000).

> I think it makes them learn a lot more about how to deal with other people and how to negotiate and probably teaches them about themselves and their attitudes to other people and their own work ethic. So I think it gives them skills that are not necessarily knowledge attainment skills but other skills which are probably very important in the work place. I don't think it's so much that it teaches them about the unit they're studying, it more so teaches them about how to get on with other people and how to negotiate and liaise with other people (Sheryl - A4).

The aforementioned quotation also implies an apparent disconnect with the third key theme area, the product outcome. The respondents appear to be making a clear distinction between the learning of teamwork skills that are relevant to future employment, and which occur through the experience of group work, and the learning of technical content knowledge and the academic skills required to submit a quality product to be assessed. The separation of these initial conceptions of group work in accounting is aptly described by one of the tutors, who is also a unit coordinator in other units (not under investigation). Having many years of teaching experience, Bill explains his positive impressions of the academic learning of content that occurs for a select few in group work, but notably focuses on a different type of learning that occurs through dealing with the process challenges of the social or group dynamic aspects.

> Well I think there are two aspects. One is the academic learning, and I think if you take a normal group of 5 students on average, probably two or three achieve something academically because they are the ones that are doing the work and leading the academic stuff and preparing the literature reviews and the write ups. So for those two or three, it's a very good exercise because they're actually leading and doing the work.
>
> [But] I think they all learn in terms of the group dynamic, so there's that sort of non-academic side to groups as well where students become frustrated. There's communication issues, there's trying to organise meetings and they learn a lot about that. The difficulties in arranging a Saturday afternoon meeting or whether someone is going to bring the food and they don't. Oh, all that sort of stuff I think is really important as well, because that just feeds into not only event management but also in the work place and how to deal with that is sort of interesting (Bill - CT1).

The opportunities afforded in group work activities related specifically to the product outcome are represented by six sub-themes: working better, collaborating, improving academic skills, building confidence, and improved quality of the end product (see Figure 7.1). Academic perceptions in this context refer not so much to student learning outcomes, but to a better-quality assignment. The focus is very clearly fixed on

tangible outputs, such as the group assignment. The common thread is that 'two heads are better than one' when it comes to producing a superior product. Building confidence in their content knowledge and ability to hone academic skills, such as referencing, was also identified as a by-product of students' collaborating to complete an assessment task. Further evidence of this product/outcome focus is shown in the following excerpts:

> You actually get a better product from a team or a group than from an individual, 95% of the time… where groups truly work together they do produce a much better product (Linda - G6).

> If you have individual work for students and afterwards the same students are part of a group, it's a different story, because they improve their skills. The other group members will direct them, if the referencing needs to be improved, style needs to be improved, they will check their grammar... I was surprised by the improvement and quality in the group assignment (Gwen - A2).

> A couple of heads are better than one… I think that's a nice way of getting a team together, getting a group together and having them thrash out ideas… Every time a group presents, something new comes out in an environment like that and there's richness in it (Bert - B2).

> It also allows other students to confirm in their own mind what they understand in the subject (Fred - W4).

7.1.2 Group work is good for staff

As illustrated in Figure 7.1, positive thoughts about group work were also expressed in terms of the benefits it provides for the academic staff, although this area is the least populated of the four quadrants in the cognitive mapping of initial conceptions. Nevertheless, there are two areas that fall within this domain: marking and teaching strategies. Both areas focus exclusively on procedural matters and workload, with little or no reference to the rewards of teaching, or student learning and development, as a positive aspect for teaching staff. In fact, respondents who focused first and foremost on the benefits of group work for reducing marking loads also focused, not only on themselves, but on keeping other staff happy.

> Group work to me means reduced assessment in that… my sessional staff … they'll have to mark less and that they're more likely to be happy about that, so that's probably my initial reaction (Frank - C2).

> To save marking! (Sheryl - A4).

Biggs (2003) describes teachers who focus on what they need to do as being at 'level 2' in a three-level sequence of development in reflective teaching. These academics

tend to be more teacher-centred, and concerned with management issues, as alluded to by Frank, above. However, the level 2 operator is also primarily concerned with teaching strategies and what they need to do to impart knowledge and skills to the students. Biggs (2003, p. 23) explains that 'traditional approaches to teaching development often worked on what the teacher does, as do 'how to' courses and books that provide prescriptive advice on getting [material] across more effectively'. It is interesting to note here that this is also the focus of many guidelines and books published on group work and cooperative learning techniques, as discussed in Chapters 2 and 3. For some academic respondents in the current study, group work is seen as a positive mechanism to use in their teaching, but their first concern is to focus on what they need to do, as illustrated below:

> 'Okay. Now, what do I have to do?' The initial thing is like, 'What am I going to actually do to encourage the students to try to be independent and do it themselves?' (CT2).

> From my point of view it's something that I think over the years I might have been able to use a bit more effectively than I have done. I think it's really good to structure learning environments so students are learning from each other (A3).

Nevertheless, and keeping in mind that the findings presented in this section are only focusing on initial impressions, it appears that the academic respondents who first expressed positive thoughts about the effects of group work on themselves are emphasising the mechanistic characteristics of group work as a tool that is used, or a strategy to be undertaken, and provided to students:

> We expect the students to do something but we don't actually teach it to them…you cannot assume the students would come into the university with any skills... I think that any of these sort of skills that we want students to learn need to be scaffolded and provided to them and as it becomes part of their learning process (Vera - A1).

7.1.3 The problematic nature of group work for staff

The blue and green coloured quadrants in Figure 7.1 represent the negative initial thoughts that academics had about group work. Sitting below the line in the mind map, the negative responses have also been divided between those relating to staff and students, respectively. However, both of the negative domains share two common perspectives that underpin academic perceptions and experiences in this area. That is to say, in the first instance, group work is perceived as problematic for staff and students. However, for some there is a sense in which one just needs to accept the inherent difficulties and move

on: this is the second perspective. Although interrelated in a hierarchical manner, with the problematic nature of group work being the dominant issue, the essence of these two themes differs somewhat. The data suggest that process issues are central to the problematic conceptualisation, whereas values and attitudes tend to drive the yielding or acceptance approach to the difficulties experienced. The following sub-sections will highlight these differences specifically relating to concerns for staff, in the first instance.

7.1.3.1 It's hard work

Overwhelmingly, the key problem for staff is that group work is hard work, for two reasons. The first, depicted in the darker blue boxes (see Figure 7.1), signifies administrative and assessment issues. The specific challenges revolve around the fact that group work is assessment driven, meaning that its purpose is to facilitate a task goal with a product outcome that will be assessed, which in turn presents an administrative headache due mainly to diversity in the student cohort. Together these factors present academics with the initial perception that group work in accounting is difficult and problematic. One academic succinctly summed it up with the following initial response:

> Free rider problem.
> Cultural diversity.
> Encouraging students to participate within the group.
> Assessment.
> They would be things that come to mind (Bob - G7).

Furthermore, for academics with negative conceptions about the impact group work has on them, there exists an implicit (and sometimes explicit) assumption that group work is assessment. Assessment appears to be the essential element underpinning the administrative issues to which many relate. The following extracts provide evidence of this prominence of assessment in their conception of what group work means.

> Group work to me is a bunch of students, probably a maximum of four, who undertake a specific piece of assessment (George - G1).

> Well, it's part of assessment practice… it's probably the formal definition of group work (Bill - CT1).

> I think with group work, from a lecturer/tutors/unit coordinator's point of view it's always problematic, always takes a big effort, more so than other types of assessments. But I think the longer term benefit for the students, and that's what you're doing it for, I think the longer term benefit is there as opposed to doing other types of assessment (Kate - CT2).

The following two academic participants explain the challenges that emanate from what they perceive to be the root of the problem: people, but more specifically the diversity that exists in any group of students. Notably, most of the issues with diversity appear to relate to general work ethic and commitment. The issue of 'free-riders' will be discussed further in the following section about student presage factors.

> I think it all just comes about because there are different people in the world… People are made differently and some people are made to be perfectionists… and other people are made to just be more easy going… and if you're going to put those sort of people together, there's always going to be a conflict (Sheryl - A4).

> The difficulty with group work that there's a lot of people. Let's say you've got four in a group. It's difficult to get a match of people who actually will all contribute, and various ways have been tried to get around that but it's very difficult. There are always free riders, and there are also problems. I think there's enough evidence around to suggest, and it's true, that in some cases people actually pay others to do these group assignments and hand them in as their own work.
> It's very, very difficult to detect at times when that has been done (George - G1).

Applying the 3P framework of learning and teaching (Biggs, 2003), this emphasis on the administrative difficulties of dealing with particular problematic attributes of students aligns with a level one approach to teaching, whereby the focus is on 'what the student is' (Biggs, 2003). The second perspective, illustrated in Figure 7.1 in light blue boxes, aligns more closely with Biggs' (2003) level two focus on what the teacher needs to do. Labelled the 'practicalities of teaching' (in Figure 7.1), the negative connotations indicating group work is hard work for staff in this group is based on a need to make it work. This sub-theme links very closely with a similar focus discussed earlier in relation to the positive perceptions of group work for staff. Academics in this domain identify with an obligation or duty to engage students and work hard at implementing teaching strategies to achieve successful group work outcomes for their students.

> I think [it's] a whole lot of hard work. I think how am I going to make this work. How do we get students to engage in the process and actually make the process work? I understand that group work is an imperative skill in order to get on in the real world and that everything that we do in our lives requires group work and requires us to engage with other people to achieve something. So I am very much supportive of doing group work however I cringe at the actual practicalities of making it work (Beth - G10).

Notably, all these 'hard work' aspects relate to process issues, but at the same time embody an attitude of frustration and helplessness. For some academics, group work is considered hard work because they themselves do not have the requisite skills to teach

teamwork skills or to manage the administration of group work. Whilst there was some recognition that they could have sought out teaching resources, it was also apparent that the negative thoughts of some academics relate to what they perceive as the lack of an appropriate level of training, support, time, and the understanding and knowledge of skills development in students. Consider the following extracts:

> I built a new course at end of last year and I built group work in it and after one semester I had to drop it because there was so much complaint…I just didn't get any support from my head of school (Aaron - S2).

> From my point of view it's something that I think over the years I might have been able to use a bit more effectively than I have done. I think it's really good to structure learning environments so students are learning from each other. So I'm for it. I'm just not sure that I managed it as well as I could have done over the years. I'm not sure anybody really took me, or gave me, I'm not sure that I ever had, lots of good instruction about different ways to manage it…just the training, you know, I don't want to make excuses. I could have gone out and found out more actively myself (Oscar - A3).

> I don't know how they develop those skills. How should it be? (Martin - A5).

7.1.3.2 Accepting difficulties as inevitable

In addition to the problematic nature of group work for staff who see group work as being hard, in terms of the practicalities of teaching as well as administratively, a number of academics expressed an attitude of resignation. Although values and attitudes vary, the mutually held view of academics promoting a 'just accept it' outlook, is that difficulties are inevitable with group work in accounting, and therefore there will be a proportion of students for whom there will always be problems. This outcome-focused mode of reasoning, where the cost and benefits of group work are considered, and the way in which academics describe the need for yielding, is indicative of a teleological decision-making process. For example:

> There is going to be some percentage you just accept, that's just not going to work well (Oscar - A3).

> It's a cost-benefit and time management thing…Personally, I don't get involved in the group dynamics and I make that clear (Bill - CT1).

While it is beyond the scope of this study to interrogate the meaning or motivation for these negative responses, or to espouse the theories of moral reasoning (see for example: Bandura, 1991a; Kohlberg & Hersh, 1977; Rest & Narvaez, 1994), it is important to recognise that 'values issues abound in the content and process of teaching'

(Kohlberg & Hersh, 1977, p. 53). For some academics, the age of 'supercomplexity' as described by Barnett (2004), and the increasing demands made of academics within the context of a contemporary western university, mean that pedagogical decisions and value statements can potentially become egocentric, through a perceived necessity. Maximising personal utility and self-interest underpins this type of perceived self-efficacy[52] and in the cost/benefit analysis these academics feel no obligation to act otherwise (Reidenbach & Robin, 1988).

In addition, an efficacy perspective may mean that an individual will attempt to minimise the 'cost' to themselves. One way in which this can be operationalised is by focusing on student presage factors and drawing attention to lack of learning as a function of 'what the student is' (Biggs & Tang, 2011, p. 17). The following quotation highlights some key markers, such as 'it's to their own detriment', and 'too bad':

> It is true that as an academic, being able to assess what each individual has learnt was very difficult and I think potentially if a student is going to be sort of tagging along and not motivated and doing minimal work, with minimal contribution to groupwork, then potentially they will not learn a lot. I accept that. That's the downside of groupwork. So it's not a panacea, I understand that. But at the end of the day, my core belief is that everybody's responsible for their learning, okay. So if somebody joins a group and does not participate, does not contribute, well it's up to the group whether they want to keep that student or not, but at the end of the day that student will not learn and it's to their own detriment because the others will have learned anyway. Too bad if they haven't learned because I think they're responsible for their own learning (Martin - A5).

A utilitarian approach is a common feature that is evident with the academics who are resigned to accepting group work problems. They suggest that the aim should be to maximise the benefit for the greatest number. Therefore, despite the difficulties, group work is perceived to serve a useful purpose and in a cost/benefit analysis, the benefits outweigh the problems. For example:

> So there's some very positive things for the students for it but as an academic it does create a bit more difficulty but those difficulties are far outweighed by the benefits I think for the students (Fred - W4).

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[52] 'Perceived self-efficacy helps to account for such diverse phenomena as changes in coping behavior produced by different modes of influence, level of physiological stress reactions, self-regulation of refractory behavior, resignation, and despondency to failure experiences, self-debilitating effect of proxy control and illusory inefficaciousness, achievement strivings, growth of intrinsic interest, and career pursuits' (Bandura, 1982, p. 122).

> Is it valuable? Look, I don't know. I think if it's done properly it is valuable. Yes. I think we should be doing it. It's like presentation skills, I think we need to go through the drama because I think there are enough students who get enough out of it to make it worthwhile (Beth - G10).

> Even if you let them self-select the people they want to work with, there are going to be some who don't contribute, some who resent the fact that they appear to be doing more but I always thought it was worthwhile doing it because on balance, if, I don't know, 90% of the groups get something valuable out of working together then you just accept the down side and the fact you're going to have to run around and try and remedially deal with the fact that there's another 10% who are just not you know, it's a bit dysfunctional really (Oscar - A3).

7.1.4 Negative aspects of group work for students

Finally, the fourth quadrant in the conceptual mind map, introduced in section 7.1, presents the initial thoughts of academics that related to perceptions of the negative aspects of group work for students. The central theme in this domain is that students hate group work.

> I feel that students view group work very poorly.
> They don't want to do it. They don't understand why they have to do it and we're starting to try hard to get them to understand this but it is difficult (Beth - G10).

> Students hate it…They don't like it.
> I mean they'll do it but they don't like it (Aaron - S2).

The remaining themes extracted from these negative opinions are best described using Biggs' (2003) 3P model of teaching and learning: presage, process, and product. The following sections will therefore address each of the themes within the presage, process, and product dimensions, beginning with student presage factors, because as indicated by the green coloured boxes in Figure 7.1, the initial reaction of the academic interviewees in this area was dominated by comments about student characteristics. The process and product domains are shaded in grey to denote the secondary nature of these aspects. Only on further probing by the interviewer did the deeper issues of process and outcomes come to the fore.

7.1.4.1 Perceived negative student presage factors

For participants in the current study, there appear to be three key problematic areas relating to the personal characteristics or presage features of individual students, particularly where assessment is perceived to be the overarching stimulus to group work activity. These are: individualism, international students, and free-riders. The negative

aspects of group work assessment are likely to be more severe, where these factors are present.

Individualism, which is mainly associated with high achievers, is speculated as being one of the main problems. It incorporates ambition, motivation, self-interest, self-reliance, the importance of personal goals, and therefore an apparent lack of understanding and tolerance for anything that is likely to adversely impact that individual focus, as the following extracts attest:

> If they're all going to get the same result, then I suppose the one or two strong members would ensure that the result is a little bit high. So you may actually get more of a free rider problem -- you might get more of a lock-out because I'm going very strong, and I know how to do this. And I can get us a 90%. If we share this around we're only going to get an 80%, so you may get a bit of that coming through. Whereas if it's a group that each person is assessed independently, then obviously there's not the same connectedness with this because there's no need to connect as much (Bill - CT1).

> Sometimes there's groups and they're intolerant of people's lack of skills or they expect higher skills and they just don't have that degree of tolerance that you really should be giving to people that you are working with and I [don't mean] that they should be excusing every time that somebody makes an excuse for not turning up at meeting or anything like that but they should understand that sometimes people do have… like…work commitments, and that that will stop them from attending something they might have said that they would attend (Mary - B5).

Notably, individualism can be equally applicable to free-riders. These students tend to have a self-interest priority, who through need, or choice, readily accept that others can do the work that needs to be done, allowing them to pursue their own personal goal/s. One academic suggests that for group work activities, there is a cause and effect relationship between dominant individuals and free-riders, which is often reciprocal.

> The danger is you get the free rider problems as well, or you get some students that love group work because it means they don't have to do anything -- just free ride on the rest of the group. I see a lot of evidence of that as well. The downside is that you tend to get one or two who are dominant members of the group. I think you get one or two that we call who are influential members. That's sort of where the systems start to break down (Bill - CT1).

> I mean a lot of the students are here, I feel, instrumentally to get a degree. They're not here to learn a lot, so that's how, a cynical view I know, but honestly the group work is something they approach in a very mechanical way (Frank - C2).

The other characteristic of students that is associated with group work 'problems' is 'international students'. There are various perspectives on which this theme is based, but the core issue is perceived language difficulties. For some academics their initial focus

in this area was on the reluctance of English speaking students to include their non-English speaking peers, because of the perceived impact that might have on their overall grade. In one instance, group work was observed as being better on campuses with less cultural diversity.

> I think that from an Australian student's point of view, I have noticed that some of the Aussie students are a little bit reluctant to try and include some of the students that have English as a second language, ones that don't obviously communicate very well because they want to get a good mark…a lot of the students where English is their second language, they really struggle (Kate - CT2).

> We have a large international cohort and so there's perception between some of the domestic students that they are going to end up carrying the international students because they are unable to communicate as well (Fred - W4).

> So it's completely different groups [on different campuses] and that's why I mentioned cultural diversity because group work at the *Beta* campus in my opinion because of the lack of cultural diversity is actually better than group work at *Alpha* or *Gamma* (Bob - G7).

Some suggested the problem was exacerbated by students avoiding assimilation, not practising English skills, and/or not mixing with others, even suggesting that many international students lacked social skills, which impacted on group work opportunities, such as forming groups in the first instance.

> First forming a group means that for some students who do not have, many of our students do not have very good social skills, particularly when they're international students. So one set of skills they have to do is basically communicate with others and basically form a group. And I know in my own experience a lot of students, well not a lot of, but some students have problems with that (Martin - A5).

> Part of the problem is because when they get here, I don't think they are put into good habits. When they get to me, in third year, they've got their computer open. What do I see? Chinese. Everything is in Chinese. I'm looking at them going, 'What are you doing? You're in Australia. You're a 3rd year student. The only people you should be talking Chinese to are your parents at home and you probably need to talk to them maybe once a week or once a fortnight on Skype or through email and that. See, you've got to change your operating system so that everything is in English -- if you start thinking in English and doing everything in English, your whole way of doing everything is going to improve a hundredfold'… And then, they look at you just, 'it's a bit late now' (Kate - CT2).

Distinctions were also made between the group work processes observed with international and domestic students, specifically in relation to rote learning, dividing up work, working together in groups of compatriots, and being introvert or extrovert, all of which were perceived problems for group work in accounting. For some, the solution was

to simply split up groups of international students; others lamented the need to reconsider assessment practices, focusing more on content rather than interpersonal, communication and presentation skills. For example:

> The other thing which I've noticed with the international students, they are very good at divvying up the work, you do this bit, you do this bit, you do this bit. But when it comes to putting it all together, they're not so great at making it flow, so you know who did what bit and where. Whereas the Australian students and the more domestic students that we've got here, they divvy the stuff up, but they put it all together a bit better (Kate - CT2).

> You've got to separate the international students because they, you know, they're smart students, they work really, really hard but sometimes they just need that extra help in the way of communication or presentation and that (Rose - W3).

> There's cultural issues, and English as a second language issues and I'm very mindful of that, because I've lived in parts of the world, where English is a second language… you've got to be very careful when you're assessing an Australian who gets up and is very bolshie, versus someone from [China] who tends to be much more reserved and gets behind the screen. I don't think you should be unduly sort of dumping on that person because they're not as extrovert. There are a lot of issues in the [group work] assessment practices that we need to consider… I've said to [UC] we'd want a bit more sort of content rather than presentation (Bill - CT1).

7.1.4.2 Negative processes: The group work 'storm'

As discovered in each of the previous domains examined in this chapter, various perceptions of process dominate the dialogue. The main concern with the group work process stems from the perception that students hate it. Simultaneously, the over-arching issue, as mentioned previously and shown in Figure 7.1, is assessment. Metaphorically, this means that group assessment is seen as the cloud that hangs over accounting students, and they do not like it. The perception is that students see the group assessment cloud, or read about its imminent arrival, and start complaining. The group assessment cloud can simply cast a shadow over the students' experience of accounting, or it can become dark and stormy, and rain down obstacles to study, difficulties for high achievers, barriers to trust, uncertainty in the process, and introduce issues with the indifference shown by some students. It is perceived that, in general, most students dislike being exposed in this way to the group work conditions that will affect them personally. The following extracts, in this section, clearly illustrate these perceptions, for example:

> My initial thoughts as an academic in relation to group work is that I'm going to get inundated with complaints about individual students not pulling their weight and about students not being too sure exactly what's required to do, as well as from co-

> ordinator's perspective is that it generally does create difficulty, more difficult to co-ordinate than it is for an individual assessment task (Fred – W4).

At the beginning of this chapter (section 7.1), Rose was introduced because her perception of group work for staff was positive, but the strength of past experiences highlighted an expectation of negative experiences for students. In turn her personal experiences as a student fuelled an empathetic approach to pedagogical choices made in relation to group work activities. She vividly recalls here her own experiences as a student, of being caught up in this 'process' storm that is group work.

> As a student I was so organised and I was so, I didn't trust that other students would be able to do the work as well as I could do it. You know, it probably wasn't the case but that's the way I always thought and that's reflective of my personality as well. So I had you know, trust issues on whether the work would get done and whether it would get done on time and it was always a continual stress and then I would take on a lot of extra work and I used to come out of every assignment and say, 'oh my goodness I just wish I could have done it by myself' …you see that argument continually happening and I had it the same whenever I was a student as well. And that's why I always let my students choose their own groups because the people that come up to me and say, 'can we do this because we like to work together', or 'we live close together', and things like that, I always let them go off on their own because I think back to whenever I was being a student and you know, the teachers would put me into groups and it would absolutely kill me sometimes (Rose - W3).

Uncertainty in processes was another key aspect identified as part of the fallout from the group work assessment event. This not only included having to relinquish control and rely on others, but also included a fear of the unknown, in terms of time, commitment, impact on simultaneous commitments, performance levels, self-doubt, personality, and value differences:

> A lot of high achievers like doing it on their own and not that idea that you have to rely on other people other than just yourself... And other times with group work, I think they may find it, they may get found out that they're not as bright as they think they are, however probably they are as bright but they've got that self-doubt…also when you've got group work, you need to make a commitment to meet outside of class and that may conflict with other things you have outside of university. If you live a fair way away or have family commitments or work commitments or other study commitments or that unknown, when this group meeting's going to happen and where it's going to take place and what's it involve and who's going to lead it. We get into a group with someone who's going to dominate the group or are we going to get into a group with people who just aren't going to do anything. So maybe it's that fear of the unknown. They can usually rely upon themselves but when you open it up into group work they need to have that reliance on other people as well, as well as being relied upon by other people (Fred - W4).

7.1.4.3 The product/outcome of perceived negative student experiences

Not surprisingly, academics also identified the product of negative experiences in group work as problematic. There were three key themes associated with these outcomes: the poor quality of the end product, the submitted assignment; high achievers and international students tending to stick together due mainly to trust issues and uncertainty; and ultimately accounting students ending up with limited team work skills when they leave university. The following quotations aptly demonstrate the focus for academics in these areas:

> *Assignment:*
> It looks like, nowadays, everyone is doing their individual parts and then come and combine the work without reading it as a group to see whether it make sense or not, like, they just submitted their work as it is, with every individual part combined together but not really going through it from the beginning to the ending with everyone's work in there and giving feedback and making changes. And it's not just the presentation because I had some group work before as well and it seemed to be very individual work because you could see. Some of them even are quite ridiculous having different formats and different -- you could pick it up straight away (Zoe - CT5).
>
> *Sticking together:*
> We managed to randomly get a mixture of students in their groups. But I found that there were probably still about 30% that's stuck to their own little group and didn't want to sort of get out and try to meet new people. Because obviously, they didn't know who they were and didn't trust what their capabilities were, so they stuck to their own group, which was a mistake because they stick with their own little group and then they don't end up trying anything different…I also find that the international students, by sticking to themselves, it can be quite limiting as well. So if they have one student in there that comes from a dominant English-speaking background, the quality of their communication as it comes across, not necessarily the content; that improves tenfold because they're practising whereas if they stick to their own little group, they're just talking amongst themselves (Kate - CT2).
>
> *No group work skills:*
> One of the big things that the students will come to you, consistent things they will come to you is, oh, so and so's not doing any work and again they're still in their own little cocoon. They don't really have a lot of empathy. They never stop and ask why that person's not contributing. All they can see is that, I want to do my assignment now, and that person's not here. And so they haven't learnt all of those other skills. I think we need to offer a little bit more direction in the way that we get them to do the group work…But when you've got students from other cultures and different ages, then the rules kind of change cause not everyone is playing or is aware of the same rules (Vera - A1).
>
> There's just so many of them that come out [of university] that have no idea how to incorporate their work with other people and that's a skill they need to learn over months if not years at times (Linda - G6).

> I fully understand why we're getting a lot of employer pressure to make sure this is part of our courses, because these students, particularly in accounting, are coming out and they can't work in a team (Beth - G10).

7.1.5 Summary of initial thoughts of group work

To open the dialogue with academics about their perceptions and experiences of group work in teaching accounting, this interviewer posed a broad open-ended question that elicited a range of initial responses. It will become evident in the following sections that this initial questioning and probing uncovered key themes that would resonate throughout the remainder of the survey/interview.

In summary, academics' initial responses about group work can be mapped into four domains:

1. Positive thoughts about the opportunities group work provides for students;
2. Positive thoughts about the mechanism of group work for assisting teaching staff;
3. Negative thoughts about the practicalities and administrative burden on staff; and
4. Negative thoughts about group work assessment for students.

Within each of these domains, the key themes, opportunity, teaching tool, practicalities, and assessment, are divided into sub-categories that highlight the underlying concepts (as shown in Figure 7.2). Despite the different foci on positive and negative aspects for the two main subjects, staff and students, a common feature across all domains is the preoccupation with process outcomes. For example: group work is seen as an opportunity for students to socialise with their classmates, to experience 'real-life'

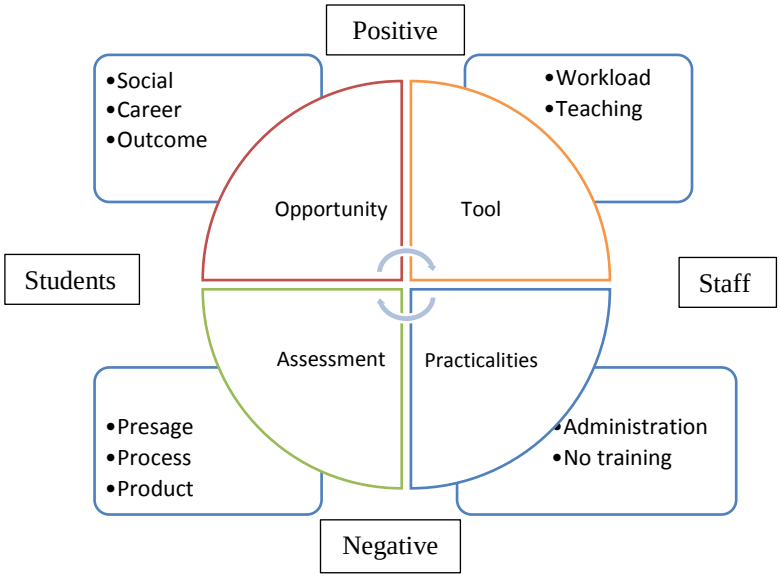


Figure 7.2 Matrix of key themes in academics' perceptions of group work

situations that will be useful in their future careers, and to get help and/or share the load with assignments. For staff, the benefits of group work relate to using that mechanism or structure to reduce workloads and/or assist in their teaching. It is a means to an end. Notably, the teaching of teamwork skills, and the assessment of teamwork learning outcomes per se, is rarely considered in the initial sentiments expressed by academics.

7. 2 The key aspects of successful group work

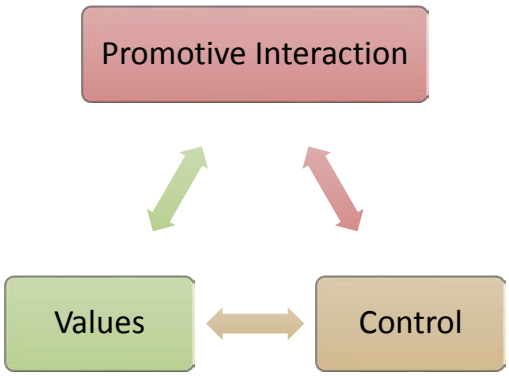
The second open-ended question asked participant academics to share their opinions and experiences of what makes 'group work' work. One academic suggested the question was presumptuous because most of the time it cannot work, the main insurmountable problem being that there are 'always free-riders' and therefore 'it's difficult to get a match of people who actually will all contribute' (George - G1). Despite the negative connotations, this view highlights the first key aspect of group work success, as derived from the academic transcripts, that is, students' personal attributes and values, and clearly aligns with the presage factors considered in the previous section. Another two key themes identified as important by academics are categorised and labelled: control and promotive interaction (as illustrated in Figure 7.3). The following section will explore each of these aspects in turn.

7.2.1 Students' personal attributes and values

In expressing their opinions of what makes group work work, the accounting academics interviewed focused on the personal attributes and values of students. They suggested that certain personal characteristics aid in the facilitation of successful group work experiences. Specifically, these included the common need for:

- Enthusiasm (B5, CT3);
- Respect (B5);
- Tolerance (B5);
- Empathy (A1);
- A good attitude (A3);
- A good listener (CT5);
- A willingness to get together and put in the work (B5, C1, CT4);
- A willingness to take action on non-contributors (G7);
- Leadership (A1, G7); and
- Work experience (S2)

Figure 7.3 The key elements of successful group work in accounting



With the possible exception of leadership skills and work experience, taken together this list of attitudinal characteristics resembles Bloom's affective domain of learning (Krathwohl, Bloom & Masia, 1964). Although not as well-known as the intellectual cognitive domain espoused by Bloom and his colleagues over 50 years ago (IACBE, 2016), their taxonomy of educational objectives included a similar hierarchical framework for the affective nature of learning, as well as a third psychomotor domain. Krathwohl et al. (1964, p. 7) defined the affective domain as:

> Objectives which emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience… objectives in the literature expressed as interests, attitudes, appreciations, values, and emotional sets of biases.

Teacher attributes, such as having a genuine belief in group work and the training to facilitate group work, only featured in the response provided by one academic (Bob – G7).

7.2.2 Control

Notably, in relation to teacher characteristics, what the teacher does in terms of planning, facilitating, and directing group work activities was the most prominent aspect identified by academics. The general view is summarised in the following quote:

> I think it works because we make it work (Vera - A1).

Opinions varied, however, on how best to operationalise the planning and facilitation of group work in order to make it work. The central theme dividing opinion was control. For some, teacher control and direction was paramount.

> What I found with group work, it works very, very well if it's very, very directed. You give the students very minimal options (Fred - W4).

> Giving students very clear parameters about expectations and the level of effort required…Ensuring groups start early and allocate work and don't leave it to the last minute…I make students interview one another when groups are being formed at the beginning of a semester and make sure they are in groups with like-minded people. Students have the choice and if they choose unwisely then they may suffer with a lower than expected grade. I allocate time in class for groups to get together in the lead up to the assignment submission so they can't say they haven't had time to meet (Kate - CT2).

In one case, it was most important for the teacher to control every aspect of group interactions, especially in first year units. The need for teacher control to ensure successful interactions meant that focus was limited to cooperative learning within the classroom environment, rather than group work tasks and interactions that occur outside of that context. Interestingly, at this level of control, third year financial accounting units were considered to have little scope to facilitate higher level group work, because of a perceived need to focus on technical skills.

> So the main skill I concentrate on there is learning to work together but in a very set environment. It's within the classroom. And they get to practise team leadership skills, making sure that everybody contributes... it's the part that I can control… it's all about that sort of contribution. I believe that from the beginning to have that protective environment, keep it within the class, so that it is directed. If anything happens, then you're in control and you can do something about it straight away (Vera - A1).

> There's not really much scope for third year in the way that it's structured…I don't think the group work is appropriate for that level of compliance and technical skills for that particular subject. There's heaps of others that will take the group work to the next level (Vera - A1).

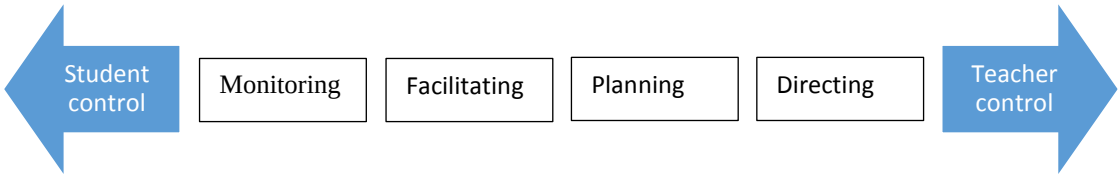
At the other end of the spectrum, the perception is that academics should not interfere at all, other than to monitor the situation. From this perspective students are responsible for forming their own groups, writing their own group contracts and dealing with conflicts. Consistent with the previous conception that suggested full control was mostly relevant to first year students, those promoting total autonomy for student groups acknowledge the limitations of this model for first year students. Given their 'hands-off' approach, it is suggested that group work is not appropriate for first year students at all.

> I don't impose anything in my groups. I can monitor what they are doing [but] group work works in the sense that first of all you have to give them opportunity to choose their own group members. And then tell them to write their own contract. So that we don't have to deal with any other issues…unless they make a complaint I

> don't interfere…In my view, I think group work maybe should not be introduced in the first year, at least second year onwards I think is the appropriate time to introduce group work. They get to know and they become a little bit more mature about the university department, their own responsibility, what to expect from the lecturers, and with that kind of orientation, a bit of maturity there (Nadal - CT3).

Other aspects of planning, directing and facilitating the group work process can be plotted along what is best described as a control continuum, as illustrated in Figure 7.4. At one end, the perception of accounting academics is that group work works when students are given autonomy, with the responsibility and control to manage group work dynamics and processes in their own way. The teacher controlled classroom situation, where students are led through a series of activities involving group interactions, represents the opposing view of what provides for successful group work experiences.

Figure 7.4 The academics' control continuum of group work processes



The academics' role in planning and facilitating group work activities, to varying degrees, occupies the 'middle-ground' position along the control continuum. For example, in response to the question 'what makes group work work?' the following extracts from participants provide qualifying statements to justify their views. These present somewhat conditional perspectives in relation to the amount of control and direction that may be required in the teacher/student relationship and in response to the group work task.

> I think it's got to be autonomy. To one degree you've got to allow them the ability to explore [but] you've got to set it up properly, you've got to form your groups in such a way that they know their purpose, they've got their objective. They might not necessarily know each other at that point but the process allows them to integrate well together and I think the planning part of it in terms of setting up is very important. It can't just be a groupwork for the sake of groupwork… I think it's the type of planning that goes into it that facilitates the group environment and facilities what the group has to do (Bert - B2).

> If it's used in an assessment framework, the activities have to be well thought out, well managed, quite a bit of time put into making it function well and be purposeful. It's not a set and forget arrangement (Roy - B1).

> I think if we could spend more time with the students and we could facilitate the group process, so if there was more of an involvement by somebody to facilitate the process. If we had more time in the tutorials that we could actually sit and say well let's form groups and let's do all this, or in the lecture, let's form a group and let's go through a dummy of the process, I think time (Beth - G10).

7.2.3 Promotive interaction

The third key element of successful group work is labelled 'promotive interaction'. Although the term itself was not used by any of the participants to describe the interactive process perceived as necessary for group work, their descriptions mirror the definition of 'promotive interaction' in the cooperative learning literature (Johnson & Johnson, 2013). The qualities thought to be important by the interviewees in the current study were identified as: working together, providing genuine input; collaboration; mutual help; sharing and incorporating ideas; communication; quality experience; and combing skill sets. These aspects highlight characteristics of promotive interaction that help create interdependence (Johnson & Johnson, 1989a; 2005a).

> You have to be a good listener. You need to collaborate with the other team members and also to work towards a deadline. Make sure that you have timetabled with due deadline that's very strict and adhere to those deadlines. And question when you have anything that you don't understand and making sure that you have lots of group meetings to clarify anything that's grey. And communicate your expectation from each other, very, very clearly right at the beginning (Zoe - CT5).

> Where they genuinely work together - whether that's virtually or face-to-face or both. Where they genuinely provide input to each other's work and spend time editing the whole piece of work so it's consistent (Linda - G6).

> Mutual help, that they help each other (Gwen - A2).

> Ideally, you get someone that's very strong in statistics and maths coming in; some others are strong in English, and someone that has high level analytical skills. You're getting different mindsets and skill sets, that's the theory (Bill - CT1).

The supporting data for this small sample of accounting academics does not facilitate a comprehensive analysis of promotive face-to-face interaction within this theme area; however the findings are consistent with the plethora of literature that lists promotive interaction a necessity for group work to work (Johnson & Johnson, 2005b; 2009).

7.2.4 What makes group work 'work'?

In summary, the key themes relating to academics' perceptions of the components of successful group work include: student attributes; control; and promotive interaction. For

each aspect, the academic survey interview participants appeared to focus on characteristics of individual students. In the main, the student attributes that were deemed to be important included affective attitudinal dimensions, in addition to two skill areas, namely leadership and work experience skills. Control was conceptualised as a continuum of varying degrees of control over group work processes. Perceptions ranged from a view that success is obtained through the teachers' directive and control with minimal student input, to student autonomy and responsibility for nearly all aspects of group work processes and dynamics. Finally, promotive interaction was gauged as being a necessary element in the success of group work within accounting education.

7.3 Group work and the accounting curriculum

The final open-ended question in the survey interview of accounting academics, asked about their perceptions of group work and the accounting curriculum. As noted earlier in Chapter 2, accounting education, as a discipline, has suffered decades of harsh criticism for a curriculum that is perceived to be too technically focused, and lacking in required generic skills development.

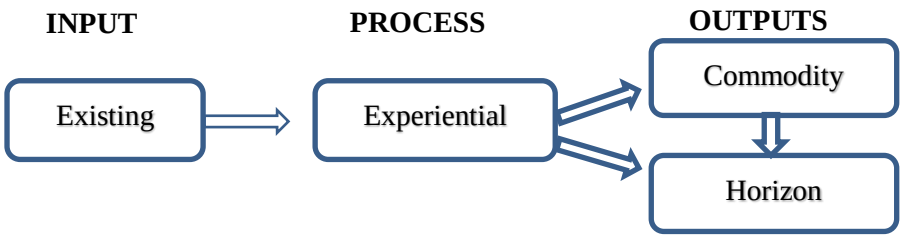
Participants in the current study overwhelmingly agreed that teamwork skills were vitally important for accounting graduates. Acknowledging that some academics may have expressed an inherently positive biased position, pre-conditioned through the ongoing pressure from the profession, government, universities, and departmental heads (Stalans, 2012), the data has revealed a cross-section of those who passionately believed in the statements being uttered, and who demonstrated a sense of ambivalence in conforming to the rhetoric.

Nevertheless, across the spectrum, it was evident that the teaching of group work skills was not considered part of the accounting curriculum, for different reasons. The analysis of these reasons resulted in identifying four key theme areas surrounding the conceptualisation of group work and how teamwork skills are developed in accounting education. From the curriculum perspective, teamwork skills were seen as:

1. Presage characteristics (existing);
2. Internalised through experience (experiential);
3. Measured in terms of product outcomes (commodity);
4. More relevant to the workplace (horizon).

Figure 7.5 illustrates the hierarchical nature of each of these identified themes. Each of the theme areas represents teamwork as either an input, a process, or an output

Figure 7.5 The EeCH curriculum model of teamwork skills



of the accounting curriculum. This perspective was labelled the EeCH curriculum model of teamwork skills, because something appears to be missing – the 'T' for 'Teach'. The following sections will discuss the conceptualisation of each in turn.

7.3.1 Existing skills

The first theme area encompasses those who perceived teamwork skills were talents that students brought with them to university. Some clearly articulated that there was no need for teaching teamwork skills because students should already possess interaction skills that have either evolved from school days or life skills developed through social media and technology. For example:

> It's an important part of education and it evolves from primary to secondary (Bill - CT1).

> I've always been a little bit hesitant about just having to allocate time and our limited time we have with students, allocating too much time for things like that…I will assume students have certain fundamental skills in terms of interaction with other people in a co-operative task (Oscar - A3).

> I think probably sometimes in today's society we under-estimate how much students interact, you know electronically and in other ways. I think the rule book's changed a bit and perhaps a generation of older academics perhaps not understanding how much these students already interact together (Frank - C2).

7.3.2 Experiential learning of teamwork skills

Others similarly perceived that teamwork was a lifelong learning skill; however, their perception differed slightly in that they acknowledged there was an experiential learning experience that occurred within accounting that helped to further develop team work skills. This has been labelled 'experiential' since it focuses on how teamwork skills are internalised and learnt from experience. For this group the value came from 'real world' group work experiences and overcoming challenges. Assessing the attainment of these skills was not considered by this group.

> It's the real world and whether it's assessed or not, it's really important (Bob - G7).

> A single academic exercise so they learn various elements isn't as valuable as the intellectual and social challenge that group work is. There's just so many of them that come out that have no idea how to incorporate their work with other people and that's a skill they need to learn over months if not years at times (Ben - C6).

7.3.3 Teamwork skills as a commodity

Another emphasis, in answer to the curriculum question, was the importance of group work as a mechanism or tool to achieve a goal. Whether intentional or not, the following small extract accurately captures the essence of this theme where teamwork skills are identified more as a commodity. When asked 'do you believe teamwork skills should be included in the accounting curriculum?' Bob responded:

> Absolutely, no doubt about it. It's not only technical but …also group work on its own is a generic skill that employers demand (Bob - G7).

This suggests that group work is 'the skill'. This does not mean that the accounting academics interviewed were not aware of the semantic differences between group work and teamwork, but rather that the general consensus was that the group work experience, as mentioned earlier, provided the skill development required. An extension of the 'commodity' theme is the perception that group work and/or teamwork is a series of production inputs that results in a tangible product at the end. Despite the question being directed towards their belief in whether or not teamwork skills should be part of the curriculum, the focus in the following two extracts was the product of group work.

> There's no question in my mind. The measurements however in terms of what the team work is or how it does, has got to be performance based. It's got to be the result of what the group comes up with (Bert - B2).

> It's an holistic approach from the start of semester. Where it's just dropped on them in week 7 to form a group and do an assignment, you know, rubbish in, rubbish out sort of thing. What's made a big difference is we have a draft due on the tutorial a week before the assignment. Now that doesn't get any marks, they lose a mark if they don't submit it. We don't read it, we're just checking that we've seen it but it really improves the performance (Linda - G6).

7.3.4 The horizon perspective

Finally, teamwork skills are thought to be an important component of the accounting curriculum for the purpose of educating students about the accounting profession and what they should expect in their future careers. This theme area has been labelled the

'horizon' perspective because it sees teamwork skills as being more relevant to work as a professional accountant rather than a graduate attribute or a skill to be developed in the university accounting course. The horizon perspective also supports the earlier analysis of respondents' initial perceptions of group work and highlights the consistency of their convictions for the duration of the interview. For example:

> I've come from industry and I worked in a number of roles… and they all revolve around your communication with individuals within a team environment or discussing with other teams. And so to be just an individual and then not have that experience of group work at university is sort of misleading by what sort of environment you're going to be working in when you get out into industry (Fred - W4).

> Because when they do go out and get a job they will have to collaborate with people and they are going to have to pick up the slack for other people, or bow to somebody else's better knowledge, and things like that, and I think that working in teams allows them to just get a preview of what it will be like out in the world (Mary - B5).

7.4 Chapter summary

This chapter has analysed the qualitative data collected from 23 accounting academics, from across six Australian universities. Their perceptions and experiences as expressed in answer to the open-ended questions posed during the survey interview underpinned this analysis. In particular, the first question, which asked academics to share their initial thoughts about group work, highlighted the decision frames that informed academics' responses (Stalans, 2012). The key themes emanating from the analysis of question one were categorised into four domains where group work experiences were most prominent. These included: assessment, and opportunities for students; and teaching tools, and the practicalities and administrative burdens for staff. The four domains can be usefully presented on a 2x2 matrix indicating the positive and negative aspects identified for both students and staff (see Figure 7.2).

The key components considered necessary for group work to be successful in the accounting education environment were student attributes and values, control and/or appropriate management, and promotive interaction between group members. Notably, the existing attributes or characteristics of students were also viewed to be a key consideration in the context of group work within the accounting curriculum, along with the experiential learning of teamwork skills; the product outcomes as a performance

measure of teamwork skills; and the horizon perspective, which referred often to the future careers of students, and the relevance of teamwork skills in that context.

The next chapter will cover students' views of group work, and as part of the stage one research design, quantitatively analyse surveys conducted at three universities.

Chapter 8: Analysis of Students' Perceptions and Experiences of Group Work: Survey

8.0 Introduction

This chapter will quantitatively analyse accounting students' perceptions and experiences of group work at three different Australian universities. The first section provides a demographic profile of the sample cohorts, as assessed by the data collected in Part C of the student in-class survey. The following sections will analyse the survey proper. It begins, in section 8.2, with a descriptive analysis of the introductory general questions about group work, and how students perceived the group work learning environment overall. Section 8.3 reports on the reliability of the data set before the results of the exploratory factor analysis (EFA) are presented in section 8.4. The EFA was used to identify the underlying common factors for students regarding their perceptions and experiences of group work in accounting. Further analysis of the underlying constructs in section 8.5 conveys findings that help to clarify the relationship between Social Interdependence Theory (SIT) and the students' experiences of group work. The chapter concludes with a summary of the quantitative analyses undertaken and the related key findings for the sample accounting students at the three case study sites.

8.1 Demographic characteristics of student respondents

This section examines in detail the characteristics of the student participants at each of the research sites and in combination as a group of third year undergraduate accounting students. Student demographics are an important aspect of this research for a number of reasons:

- Maximum variation underpins the research design used in this study;
- Prior research has found student demographics are related to perceptions of generic skills (Daly et al., 2015; Keneley & Jackling, 2011; Smith et al., 2016);
- Accounting education literature rarely provides a detailed profile of respondents;
- The theoretical framework discussed in Chapter 3 suggests that personal characteristics will be a factor that influences the group work experience;
- To inform the research questions relating to student perceptions of group work.

The descriptive statistics displayed in Table 8.1 present the frequencies for individual demographic variables.

8.1.1 Gender and age

Consistent with the earlier pilot study and with studies of survey respondents that have found females are more likely to participate in student surveys (Dey, 1997; Porter & Whitcomb, 2005; Sax et al., 2003; Spitzmüller et al., 2006), panel A (Table 8.1) shows that respondents in all three cohorts comprised approximately 60% females and 40% males[53]. A binomial test suggests that this overall difference in gender proportions is statistically significant (p = .023), and mirrors similar 60/40 splits between female and male accounting students in other studies about group work (Ballantine & McCourt Larres, 2009) and generic skills (De Lange et al., 2006). There was no significant difference between each of the three cohorts in terms of gender (α=0.05).

Not surprisingly, the overall majority of third year students were aged between 18 and 25 years old (87.1%), although notably, there is a clear variance between the cohorts, with Uni B having a younger cohort (60.5% aged 18-21) compared to the 18-21 year old students at Uni A (40.2%) and Uni C (46.8%). At Uni A the majority of student respondents were aged 22-25 (49.5%). At Uni C there appears to be a broader spectrum of ages completing the survey, with students in all age ranges, up to and including 45-64 year olds. This variation is useful for the follow up interviews, however for the purposes of empirical robustness, according to the Kruskal-Wallis statistic, the age of students was not significantly different across the three cohorts, χ^2 (2, N = 222) = 3.284, p >.05.

8.1.2 Cultural diversity

Panel C in Table 8.1 shows that in all three cohorts English is a second or subsequent language for over 40% of students (39.3%, 47.4%, and 43.0% respectively). Simply relying on language however, as the only indicator of cultural diversity, is potentially limiting. For example, further investigation found an additional 16 students whose main language was English but who had indicated that they were international students from Malaysia, China, the Philippines, Singapore, Zimbabwe, South Africa, United States and New Zealand, only some of which are primarily English-speaking. Students were asked a number of different questions to establish the extent of cultural and ethnic diversity in each cohort. The questions related to the language spoken at home (Q21),the country in which they completed their secondary schooling (Q22), their country of residence (Q23),

[53] These proportions are also consistent with national enrolment data for the higher education sector in Australia which show that 56% of all students were female (DET, 2014).

Table 8.1 Demographic characteristics of student respondents

Variables	Uni Cohort A		Uni Cohort B		Uni Cohort C		Total	
	n	%	n	%	n	%	n	%
Panel A: Gender								
Male	48	44.9	15	39.5	31	39.2	94	42.0
Female	59	55.1	23	60.5	47	59.5	129	57.6
Missing					1	1.3	1	0.4
TOTALS	107	(47.8)	38	(17.0)	79	(35.3)	224	(100.0)
Panel B: Age								
18 – 21 years	43	40.2	23	60.5	37	46.8	103	46.0
22 – 25 years	53	49.5	11	28.9	28	35.4	92	41.1
26 – 29 years	4	3.7	3	7.9	7	7.6	14	5.8
30 – 44 years	7	6.5		-	4	5.1	11	4.9
45 – 64 years		-	1	2.6	2	2.5	3	1.3
Missing[*]					2[*]	2.5	2[*]	0.9
Panel C: Cultural diversity								
Language								
English	65	60.7	20	52.6	43	54.4	128	57.1
English – second language	42	39.3	18	47.4	34	43.0	94	42.0
Cultural & ethnic groupings								
Middle Eastern (Saudi)		-	1	2.6		-	1	0.4
South-East Asian[a]	15	14.0	3	7.9	18	22.8	36[*]	16.1
North-East Asian[b]	28	26.2	14	36.8	18	22.8	60	26.8
Southern Asia[c]	2	1.9	1	2.6	2	2.5	5	2.2
Americas[d]		-	2	5.3		-	2	0.9
South & East Africa[e]	2	1.9		-	2	2.5	4	1.8
Total international students	47	(43.9)	21	(55.3)	40	(50.6)	108	(48.2)
Panel D: Education								
Yr 12 to university	52	48.6	22	57.9	45	58.4	119	53.6
Deferred uni. Studies	55	51.4	16	42.1	32	41.6	103	46.4
Previous learning experience								
Foundation course	1	0.9	5	13.2	3	3.8	9	4.0
Certificate / diploma	39	36.4	8	21.1	35	44.3	82	36.6
Degree	3	2.8	2	5.3	8	10.1	13	5.8
Gap year / travel	5	4.7		-	3	3.8	8	3.6
Work / family	11	10.3	5	13.2	4	5.0	20	8.9
Total with prior experience	59	(55.1)	20	(52.6)	53	(67.1)	132	(58.9)
Current Degree								
BCom/BBus only	100	93.5	34	89.5	76	96.2	210	94.6
Combined degrees	7	6.5	4	10.5	1	1.3	12	5.4

	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Panel E: Time commitments												
Units completed (progress)	97	13.77	(5.85)	36	17.20	(5.62)	68	17.79	(4.25)	201	15.75	(5.63)
Enrolled units (study mode)	101	3.48	(0.78)	34	3.71	(0.58)	73	3.88	(0.83)	208	3.65	(0.79)
On campus – hours p/w	89	11.94	(8.74)	30	17.90	(10.60)	68	13.77	(10.50)	187	13.56	(9.84)
Independent study hours p/w	89	13.11	(10.13)	31	11.52	(11.14)	63	12.59	(10.25)	183	12.66	(10.31)
Paid work – hours p/w	70	20.17	(11.62)	14	20.64	(12.21)	38	18.87	(8.01)	122	19.82	(10.63)

[*] The same 2 missing cases relate also to data in Panels C, D, & E.

[a] Burmese, Thai, Vietnamese, Filipino, Indonesian, Singaporean, Malaysian[*] (incl. 16 Chinese Malay)

[b] Chinese, Hong Kong, Korean

[c] Indian, Bengali, Pakistani

[d] Brazilian, USA

[e] South African, Zimbabwean, East African

and if they were of Aboriginal or Torres Strait Islander origin (Q24). Only one student out of the total sample of 224 identified themselves as being of Aboriginal or Islander decent[54]. The male student was from Uni A. The remaining cultural and ethnic groupings[55] in panel C represent the total number of students who indicated any connection to another country or culture in the response given to questions 21 – 24 inclusive[56]. A total of 21 countries (including Australia and New Zealand) and 22 languages or dialects[57] (including English) are represented in the total sample of 224 students from 3 geographically different cohorts of third year accounting students.

Overall, international students account for almost half the sample population (48.2%), with the greatest number originating from North-East Asia, specifically China (26.8% of the entire sample; 55.6% of all international students within the sample). Notably 44.4% (16/36) of the South-East Asian students are also ethnic Chinese. Together, students from North and South-East Asia account for 42.9% of all valid responses to the in-class survey, and 88.9% of the international students participating. These statistics are not surprising. Since 2004, Chinese students have made up the largest cohort of international students studying in Australia (Briguglio & Smith, 2012). In the Australian higher education sector, around 40% of all international students are Chinese, followed by Malaysian students (7.2%) (AEI, 2013). In the current study ethnic Chinese students from China, Hong Kong, and Malaysia comprised 32.6% of the entire sample. The dispersion of cultures is not significantly different between the case study sites (α=0.05), however it is interesting to note that there are relatively fewer accounting students from South-East Asia attending Uni B.

8.1.3 Education

Table 8.1, panel D, presents educational characteristics for the survey sample. The vast majority (94.6%) were enrolled in a single business/commerce degree at their respective institutions. Each degree comprised a total of 24 study units generally completed over a 3 year period, except for Uni B where a standard trimester system reduced the overall time horizon to 2 full years of study. Combined degrees are marginally more popular at

[54] Australia-wide enrolment data for Aboriginal & Torres Strait Islanders was 1% in 2012 (DIISTE, 2013).
[55] Cultural groupings are based on Australian Bureau of Statistics classifications (ABS, 2011).
[56] Oceania (Australian Aboriginals, Australians, New Zealanders) are not included in Panel C.
[57] See Appendix 14.

Uni B (10.5%) but together account for only 5.4% of enrolments.

Overall nearly half (46.4%) of all respondents had previously deferred their university studies choosing not to go straight onto university following the completion of secondary school. This infers wider life and educational experiences[58] but also highlights a growing trend towards non-traditional pathways to university (AEI, 2013a; DEEWR, 2009; Evans, Burritt & Guthrie, 2012). Specifically 36.6% of all students first obtained a certificate or diploma from a college or other institute of advanced education (such as TAFE). Others worked (8.9%) or completed foundational courses to enter university (4.0%). Relatively few (3.6%) indicated that they had simply taken a gap year and/or travelled before entering university. These results are consistent with national trends. In 2016, only 37.4% of all university applications were from year 12 applicants (DET, 2016b). Clearly, the international cohort accounts for a large proportion of the non-year 12 enrolments, however the latest data also suggests that 46% of all international students have previously studied in other post-secondary sectors (DET, 2016a).

Pearson's Chi-square tests of contingencies, where $\alpha = 0.05$, showed no statistical relationship between the nominal dependent variable, deferred university studies, and the nominal independent variables, cohort, gender, and the domestic/international dichotomy (see Table 8.2). When students were further divided into four main culture groupings, namely, Oceania, South-East Asia, North-East Asia, and all others[59], two groups had significantly greater frequencies than others groups ($p < .05$), but in opposite directions. A greater proportion of North-East Asian students went straight to university from senior secondary school in each of the three cohorts; although the Chi-square test was only statistically significant for those attending Uni C, χ^2 (1, N=18) = 8.000, $p < .05$. In contrast, more students overall from South-East Asia (67%) had deferred their university studies (see Table 8.3). However, this result is being driven significantly by South-East Asian students at Uni A, χ^2 (1, N=15) = 11.267, $p < .001$. In the cohort at Uni A, 93% of the South-East Asian students had completed an additional step (i.e. a college diploma) before entering university.

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[58] Prior learning experiences are broadly defined in terms of formal educational qualifications (courses, certificates, diplomas, degrees) as well as learning experiences in workplace training and travel (for example).

[59] The expected frequency assumption of Chi-Square tests requires that no more than 20% of the expected cell frequencies are lower than five (Allen & Bennett, 2012). Therefore, all cultural groups with less than 5 students in each cohort were combined to form a new variable 'all others'.

Table 8.2 Pearson Chi-Square tests on deferring university studies

Did you come to uni. straight from year 12?	Value	df	Asymp. Sig. (2-sided)
Uni cohorts (A, B, C)	2.084[a]	2	.353
Gender	.054[a]	1	.816
Domestic/international	.058[a]	1	.810
Culture-ethnic groups[b]	9.172[a]	3	.027*
N of Valid Cases	222		

a. 0 cells (0.0%) have expected count less than 5.
b. Oceania, SE Asia, NE Asia, all others.
* p<0.05; Cramer's V = 0.203

Table 8.3 Summary of students deferring university studies across cohorts and culture

Deferred university studies	Percentage (%) of culture group in Cohort A	Percentage (%) of culture group in Cohort B	Percentage (%) of culture group in Cohort C	Percentage (%) of culture group in TOTAL
Oceania	43	53	46	46
South-East Asia	93**	33	50	67*
North-East Asia	46	36	17*	35*
All others[a]	50	25	75	50

[a] Middle-East; South Asia; Americas; South & East Africa. Cell frequencies less than 5 in all cohorts
** p < .001
* p < .05

8.1.4 Time commitments

A Kruskal-Wallis[60] one-way between groups analysis of variance (ANOVA) was used to examine the differences between each cohort in terms of students' estimates of time commitments to various study and work responsibilities. Students' status as full or part-time was determined by asking in how many units they were enrolled in the semester. Government funding policies dictate that full-time students are those enrolled in at least 3 units in one semester (StudyAssist, 2017). The number of units completed was used as a measure of students' progression through the course.

As mentioned earlier, students found these questions about time spent on various activities the most challenging to answer. It is also acknowledged that in the question about hours spent on paid work, leaving the question blank could indicate a non-response to the item or alternatively it may not have been relevant, that is the student was not in paid employment. Alternatively, it is feasible that some international students may have been reluctant to answer the question if they were working in excess of visa allowances.

[60] The non-parametric test was used due to the violation of normality assumptions. The Shapiro-Wilk statistic was significant (i.e., *Sig* < .05) for all time-based dependent variables tested, indicating that distributions were not normal.

Nevertheless, given the interval nature of the time commitment questions, statistical inferences could still be made while excluding missing cases.

Table 8.1, panel E lists the descriptive means for units enrolled and completed, and hours spent on campus, on independent study, and in paid work. Although all units surveyed were level 3 (third year) units, descriptive statistics set out in panel E (Table 8.1) showed that Uni A students were on average only second year equivalent (M=13.77) or just over half way through their 24 unit course[61]. The mean number of units completed for the entire sample was 15.75 or two-thirds of the degree course. The Kruskal-Wallis statistic indicated the differences between Uni A (*Mean Rank* = 76.78), Uni B (*Mean Rank* = 113.24), and Uni C (*Mean Rank* = 129.07), were significant (χ^2 (2, N=201) = 34.659, p = .000). Post hoc comparisons confirmed that students at Uni B are further advanced in their studies than 28% of students in Uni A and those at Uni C are closer to completion than 45% of the students at Uni A. There was no significant difference between Uni B and C.

The ranked means (Kruskal-Wallis) of student responses were similarly analysed for units enrolled (study mode), and hours spent on campus, individual study time, and commitments to paid work. Given the variation in the sample size of valid responses for each of the time commitment variables, it was important to also establish effect size to accompany each of the significant relationships (Cohen et al., 2007).

There were no significant differences across all institutions regarding the time students spent on independent study and paid work. In fact the amount of time spent in paid work is remarkable in its similarity (*Mean Rank* = 61.52; 61.46; 61.47 respectively). On average respondents at all three universities spend 20 hours a week working in paid employment, in addition to their study loads. Although this result should be treated with some caution given the potential for 'visa bias'. An independent sample t test showed that Australian domestic students were working significantly more hours than their international peers (M = 21.66, SD= 11.09, and M = 21.66, SD= 11.09 respectively), $t(120) = 3.679$, $p < .001$, two-tailed, which might be expected. However, international students represented nearly half the sample population but only 28% of them responded to this question. Immigration rules in Australia restrict the number of hours overseas

[61] The Uni A cohort surveyed were studying the taxation unit. This law based unit is not governed by the same pre-requisite requirements as other accounting units, where students must pass 2nd year units before attempting the 3rd year units.

students can work while studying to 40 hours per fortnight (DIBP, 2017), so despite the fact that some of these students may be working more than that, it is unlikely they would report the actual hours worked if they were exceeding visa conditions (Peake, 2015), even in an anonymous survey. The potential for the overall hours worked to be under-reported in this situation should be considered.

Table 8.4 presents the post hoc Mann-Whitney U test statistics for all time commitment variables, showing significant differences exist for hours spent on campus and study mode (units enrolled), as well as the previously discussed rate of progression (units completed).

The study mode of respondents as shown in panel E (Table 8.1), in the average number of units enrolled, is 3.65 overall. This suggests that most participants are full-time students. Comparing the mean rank differences, the only significant difference is between Uni A and C, U = 2822.50, z = -3.027 (corrected for ties), p = .002. However, the effect size is relatively small (η^2 = 0.23) and all means are well over the official three unit criteria for being classified a full-time student.

Table 8.1, panel E, also shows that students at Uni B spent more time on campus than those at the other two universities. The Kruskal-Wallis analysis of variance confirms the difference between the three groups is significant (χ^2 (2, N=187) = 10.340, p =.006).

Table 8.4 Post Hoc Comparisons of Mean Rank Differences Between (University) Pairs

Time commitment variables	Tests	Uni A & Uni B	Uni A & Uni C	Uni B & Uni C
Units Completed	Mann-Whitney U	1123.00	1572.00	1041.50
	Z	-3.176	-5.752	-1.269
	Asymp. Sig.(2 tailed)	.001**	.000**	.204
	Eta squared	0.28	0.45	nsd
Units Enrolled (study mode)	Mann-Whitney U	1471.00	2822.50	1101.00
	Z	-1.498	-3.027	-1.100
	Asymp. Sig.(2 tailed)	.134	.002**	.271
	Eta squared	nsd	0.23	nsd
Hours spent On Campus(pw)	Mann-Whitney U	807.00	2754.50	718.00
	Z	-3.239	-.964	-2.335
	Asymp. Sig.(2 tailed)	.001**	.335	.020*
	Eta squared	0.30	nsd	.24
Hours spent on Independent study (at home & uni) -pw	Mann-Whitney U	1156.00	2704.50	853.00
	Z	-1.346	-.372	-.999
	Asymp. Sig.(2 tailed)	.178	.710	.318
Hours spent at Paid Work (pw)	Mann-Whitney U	488.00	1326.50	263.50
	Z	-.024	-.023	-.052
	Asymp. Sig.(2 tailed)	.981	.982	.959

** p < .001
* p < .05
nsd = not significantly different

Post hoc comparisons provided in Table 8.4 identify the existence of significant differences between two pairs (Uni A & Uni B; and Uni C & Uni B) (*U* = 807.00, *z* = -3.239 (corrected for ties), *p* = .001; and *U* = 718.00, *z* = -2.335 (corrected for ties), *p* = .020 (respectively)).

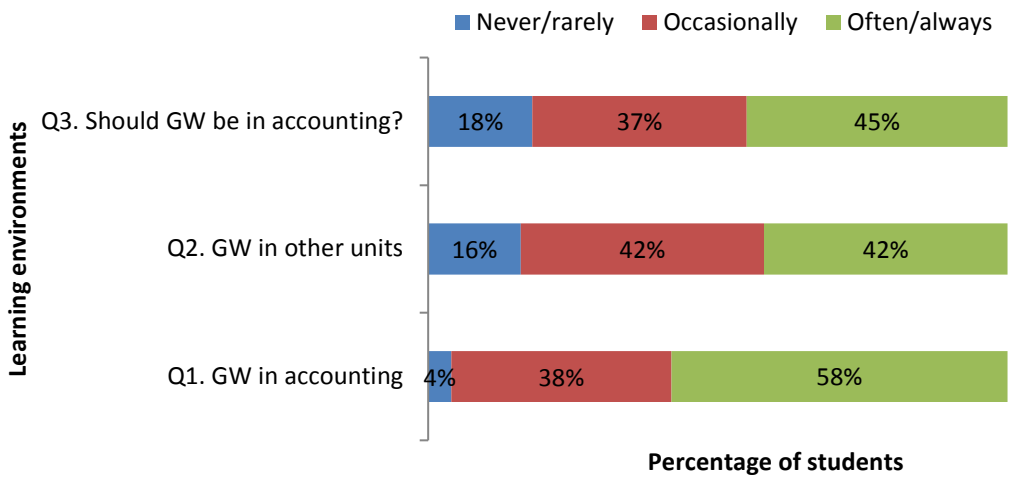
8.2 Perceptions of the group work learning environment

The in-class survey presented students with three initial, non-threatening, single questions about their learning environment. This strategy was employed not only to answer the related research questions, but also to ease any initial fears about providing personal opinions, and to promote a sense of confidence in their ability to answer the questions (Neuman, 2012). These initial relative frequency questions asked students to indicate:

1. the extent to which they were required to work in groups in their accounting units;
2. the extent to which they are required to work in groups in other units; and
3. the extent to which they think group work should be used in accounting.

Figure 8.1 shows that the respondents perceived that group work was used quite often in their accounting units (58% often/always), with only 4% suggesting it was never or rarely used. Students were asked to include the use of informal discussion groups when considering their answers. Overall the results also suggest that group work is used less often in other disciplines, but 45% of the sample indicated that some aspect of collaboration should often or always be included in each accounting unit.

Figure 8.1 Student perceptions of group work frequency in units



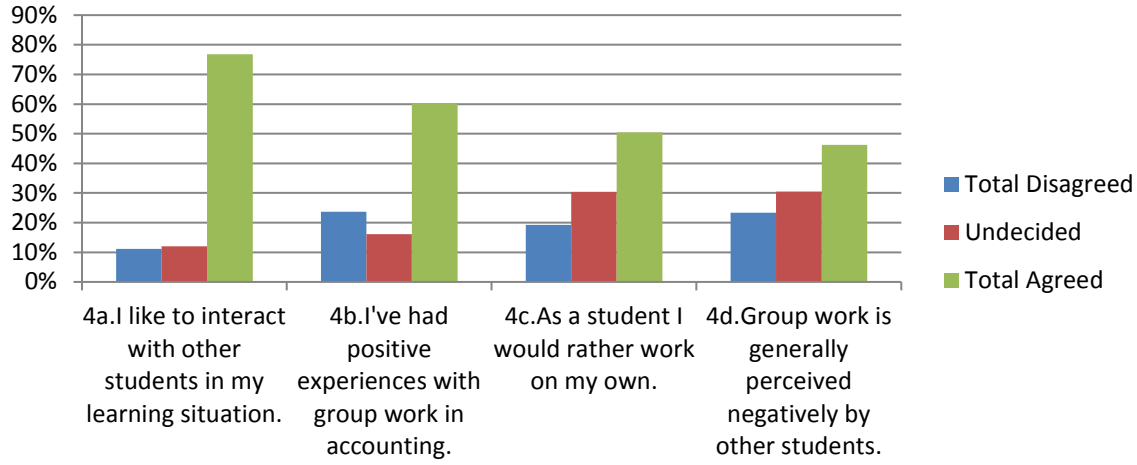
A Kruskal-Wallis ANOVA indicated that students' responses did not significantly differ across the three case study universities. This finding was consistent for question 1 (group work in accounting), $\chi^2(4, N = 224) = 7.947$, $p > .05$; question 2 (group work in other units), $\chi^2(4, N = 224) = 1.197$, $p > .05$; and question 3 (to what extent group work should be in accounting), $\chi^2(4, N = 223) = 3.532$, $p > .05$.

8.2.1 Overall perceptions of group work

Question four similarly introduced students to the concepts under investigation and asked four broad overview questions about their experiences of group work generally and their preferences for interacting with other students in their learning situation. This set of questions was measured on a 7-point Likert scale (from 1 = very strongly disagree to 7 = very strongly agree).

Combining responses into a trichotomy, total disagreed, undecided, and total agreed, Figure 8.2 presents the descriptive statistics for the general questions about group work. Seventy-seven percent of all the student survey respondents indicated that they liked to interact with other students in their learning situation, with the majority (60%) agreeing that their experiences of group work were positive. Nevertheless, half of the respondents (50%) suggested that they would prefer to work alone, while another 30% were undecided. Intuitively, these results appear to be contradictory, especially as the perception of nearly half the students (46%) was that group work is generally perceived negatively by students. However all items in question four were significantly correlated with each other. For students who liked to interact with others (Q4a) and those who believed group work was generally perceived negatively (Q4d), Spearman's rho indicated

Figure 8.2 Students' overall perceptions of group work in accounting



a marginally significant association ($p < .05$), with all other variables showing a strong relationship ($p < .001$).

The extent of the identified correlations between all items in question 4 warrants further investigation to uncover the direction of the interrelationships and to provide a more meaningful explanation of the associations. To this end, the collected data was subjected to principal axis factoring with varimax rotation (Allen & Bennett, 2012). As shown in the rotated factor matrix in Table 8.5, two factors (with Eigenvalues in excess of 1) were identified, accounting for 77% of the total variance in the data.

The interrelationships between the question 4 items are clearly evident in this factor analysis. The items underlying factor one relate to those with positive experiences of group work and a preference for working with others. The negatively signed coefficient associated with the third item, 'I would rather work on my own' (-.325) suggests that students with a positive conception of group work tended to disagree with this statement. Although a weaker measure of the construct, given the lower correlation coefficient and its cross-loading with factor two, it is logically consistent with the positive aspect of factor one. In contrast, factor two represents an underlying construct based on negative perceptions of group work, and includes a preference to work alone, a general perception of negativity from other students towards group work, and a correspondingly cross-loaded negative coefficient for experiences of group work (-.306). This result again indicates that students with a negative perspective were more likely to disagree with the statement that they had had positive experiences with group work.

A one-way between groups analysis of variance (ANOVA) was used to assess whether student perceptions differed across the case study sites. Using the standardised factor scores calculated by the Anderson-Rubin method in SPSS, the results revealed no

Table 8.5 Rotated factor matrix[a] of accounting students' overall perceptions of group work

Item	Factor	
	1	2
4a.I like to interact with other students in my learning situation.	.837	
4b.I've had positive experiences thus far working in groups in my accounting subjects.	.629	-.306
4d.Group work is generally perceived negatively by other students.		.778
4c.As a student I would rather work on my own.	-.325	.571

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.
[a.] Rotation converged in 3 iterations.

significant differences in perceptions for factor 2 (the negative dimension), F (2, 222) = 1.854, p = .157. However, in relation to factor 1 (the positive perceptions of group work), a statistically significant difference was detected between the groups, F (2, 222) = 7.377, p = .001, η^2 = .066. The size effect measured by eta-squared (η^2) indicated it was a medium-sized difference, according to convention (Allen & Bennett, 2012).

Post-hoc tests using Tukey's HSD (α=.05) confirm that students at Uni B had significantly higher positive perceptions of group work (M = .56, SD = 0.68), than students at both Uni A (M = -1.52, SD = 0.95), and the students at Uni C (M = -0.06, SD = 1.11).

8.3 Scale measures of group work: data consistency and dependability

The main sub-section of the student in-class survey focused on four key areas of group work, derived from a Social Interdependence Theory framework: group formation, group processes, individual accountability, and interdependence. To examine these key constructs, rough scales of between six and 16 items were devised from the literature and earlier pilot testing (described in Chapter 5). Each of the rough scales are first tested for reliability, and the associated variables prepared for analysis (de Vaus, 2002).

8.3.1 Reliability

Using SPSS, Cronbach's alpha coefficients were calculated to measure the internal consistency and reliability of the multi-item scales in Part A (Allen & Bennett, 2012; Coakes et al., 2009).

Table 8.6 displays the reliability scores for all items in each of the four scales in Part A (group formation, group processes, individual accountability, and interdependence). Given the apparent weakness of the group formation and individual accountability scales (α=.386 and .512 respectively), the statistics for the individual items in each scale were further examined, and presented in Tables 8.7 and 8.8.

It is widely accepted that a Cronbach's alpha of 0.7 or higher provides support for being able to reliably measure the underlying construct in a scale (de Vaus, 2002). In Part A (group work questions), question 9 and 11 have cooefficent alphas exceeding 0.7, but as mentioned, question 5 items regarding group formation and question 10 items relating to individual accountability have less than desirable scores. To increase the reliability of the scale it is customary to remove any unreliable items from the scale (de Vaus, 2002).

Table 8.6 Reliability statistics for scale items in question 5, 9, 10, and 11

Question	Construct	N of cases excluded[a]	Valid cases	% of valid cases	Cronbach's Alpha	N of items
Part A:						
5	Group Formation	7	217	96.9	.386	7
9	Group Processes	1	223	99.6	.748[b]	12
10	Ind. accountability	2	222	99.1	.512	6
11	Interdependence	9	215	96.0	.893[b]	16

[a]Listwise deletion based on all variables in the procedure.

[b]Cronbach's Alpha above .7 (acceptable level)

Table 8.7 Item-total statistics for question 5: Group formation

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
5a	.264	.316
5b	.146	.363
5c	.119	.377
5d	.138	.371
5e	.071	.412
5f	.135	.369
5g	.382	.225

Cronbach's Alpha for scale = 0.386

Table 8.8 Item-total statistics for question 10: Individual accountability

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
10a	.425	.390
10b	.489	.373
10c	.062	.575
10d	.254	.472
10e	.166	.520
10f	.300	.448

Cronbach's alpha for scale = 0.512

However, Tables 8.7 and 8.8 demonstrate that if any item were to be deleted from the scale it would not improve the reliability of the scales. Furthermore, the corrected item-total correlations are below 0.30, for all except the last item in question 5 (5g), and items a, b and e in question 10, which means they do not form part of a unidimensional scale (de Vaus, 2002). Clearly, the concepts of group formation and individual accountability require further investigation to unravel the identified complexities. However, Fabrigar and Wegener (2012, p. 140) conclude that 'it is possible for reliability to be relatively high even when scales are multidimensional in nature'. The following section analyses these issues further using factor analysis.

8.4 Exploratory Factor Analysis

Since this student survey forms part of the exploratory first phase of the research design used in this study, factor analysis is an appropriate method for analysing and further developing the original 'rough scales' used in the survey (de Vaus, 2002). It also assists

in answering two main research questions: what does group work mean to accounting students? ; and what are the factors influencing student perceptions of group work?

EFA identifies the common factors underlying preferences and opinions given in a survey. The goal is 'to understand the structure of correlations among measured variables by estimating the pattern of relations between the common factor (s) and each of the measured variables (i.e., as indexed by factor loadings) (Fabrigar, Wegener, MacCallum & Strahan, 1999, p. 275). Principal axis factoring, which is one of the most frequently used factor-analytic methods (Coakes et al., 2009; Fabrigar & Wegener, 2012), is chosen as the most suitable model-fitting procedure, or extraction method, for the current EFA.

8.4.1 Data screening for EFA

Given the exploratory nature of EFA, it is essential to understand the limitations and address several important assumptions before conducting a factor analysis, specifically in relation to sample size, normality, outliers, multicollinearity, and the factorability of the correlation matrix (Coakes et al., 2009; Fabrigar & Wegener, 2012).

8.4.1.1 Sample size and missing data

The total responses from the three case study sites in the current study exceed the 200 cases benchmark commonly prescribed for factor analysis (Allen & Bennett, 2012; Coakes et al., 2009; Cohen et al., 2007). Even with the listwise deletion of cases, where if any one item of the 41 is missing, the case is deleted, the result is N=202 valid cases. Furthermore, Part A data exhibits 'moderately good' conditions (N=224; communalities between .4 and .8 on 39/41 variables). Fabrigar and Wegener (2012) explain that the accuracy of results depends on a variety of data properties, not just size. They recommend researchers should plan for 'moderately good' conditions, with variable communalities of between .40 and .70, and at least 3 variables loading on each factor, and where a sample size of 200 would be appropriate (Fabrigar & Wegener, 2012).

The results of Little's missing completely at random (MCAR) test on the screened data set confirmed that the data are missing completely at random for Part A variables (χ^2 = 629.856, *df*=638, Sig.= .583). This result suggests that any method of dealing with missing data can be safely used to estimate statistics (SPSS, 2007). Confirmation was established using SPSS missing value analysis (MVA) to compare the means, standard deviations, and correlation matrix for both pairwise (only missing variables deleted) and

listwise deletions (cases deleted). Factor analysis was also repeated for both pairwise and listwise deletions. All results were similar, suggesting confidence in the randomness of any missing data points and the overall completeness of the data set (Tabachnick & Fidell, 2007). In the current study the pairwise deletion approach is adopted (whenever the choice is provided) to preserve as many cases as possible.

8.4.1.2 Normality and univariate outliers

Factor analysis is robust to violations of normality (Allen & Bennett, 2012; Coakes et al., 2009; Fabrigar & Wegener, 2012), although the severity of the deviations needs to be assessed. Fabrigar and Wegener (2012) report that substantial distortion of results tend to emerge when the absolute value of skew is two or greater, and the absolute value of kurtosis is seven or greater. In the current study Kolmogorov-Smirnov statistics with Lilliefors significance level tests of normality confirm that the data set is not normally distributed. However, an inspection of the skewness and kurtosis statistics showed none of the variables in Part A were skewed to that extent.

A related issue is the effect that individual outlier cases might have on EFA results (Tabachnick & Fidell, 2007). Stem-and-leaf and boxplots indicated a minimal number of univariate outliers existed in the current data set. Other suspected outliers[62] were present, but on a 7-point Likert scale these were considered a necessary and important source of variance on which the factors would be determined.

For the purpose of EFA the incidence of univariate outliers was negligible and occurred in only four of the forty-one questions being analysed in part A.

8.4.1.3 Multivariate outliers

Mahalanobis distance statistics were calculated and subsequently detected several multivariate outliers[63]. The Mahalanobis distance represents the distance of a case from the weighted mean of all variables in the remaining cases (Tabachnick & Fidell, 2007). As shown in Table 8.9 Mahalanobis distance for part A responses exceeded the critical χ^2 for $df = 41$ (at $\alpha = .001$) of 74.75 in thirteen cases. To some extent these results are not

[62] Suspected outliers are those with scores that are more than 1.5 x interquartile range (IQR) [IQR=box diagram show on the boxplot] and up to 3 x IQR. Outliers are extreme values 'greater than 3 box lengths above or below the box boundaries' (Allen & Bennett, 2012, p. 184).

[63] 'Cases with unusual combinations of values across two or more predictor variables' (Allen & Bennett, 2012, p. 182)

unexpected since 'multivariate outliers can occur when several different populations are mixed in the same sample' (Tabachnick & Fidell, 2007, p. 73). Notably, only Uni A and C are represented in the 13 outlying multivariate cases in part A[64]. Of particular note is case number 212. This student presented with the highest number of univariate outlier responses (3), was the highest multivariate outlier, and the only student appearing in all tests of outliers. A visual check of the respondent's survey confirmed that most responses were extreme (either 1 = very strongly disagree or 7 = very strongly agree). The student had not had positive group work experiences, preferred to work alone, and had never received training or monitoring from staff. Since this case was only one in 224 and it had no impact on statistical results, it was retained. What is more it is reasonable to expect that in any population of students, someone will usually have an extreme point of view. It could be argued that rather than distorting results, especially on limited scale options (such as Likert scale points 1-7), such individual outliers enhance the validity of the sample.

For all multivariate outliers, the accompanying Cook's distance statistic, which is a measure of influence, was not greater than 1 in any of the cases listed in Table 8.9. This

Table 8.9 Multivariate outlier cases in descending order

	Mahal distance statistic	Cook's distance	Case ID	Uni
Part A:				
Mahal distance 1	114.43203	0.02726	212	A
2	107.33903	0.01172	176	A
3	106.47550	0.00366	143	A
4	104.80442	0.00008	173	A
5	96.54813	0.02997	95	C
6	94.06339	0.02514	181	A
7	91.46072	0.08761	15	C
8	85.12178	0.00005	43	C
9	82.79683	0.00068	67	C
10	79.87625	0.01229	1	C
11	79.57758	0.00106	162	A
12	77.00225	0.00652	44	C
13	75.92951	0.02222	48	C

[64] Only Uni A and C were represented in the extreme univariate outliers as well.

suggests that no individual differed enough to influence the overall statistical relationships. To confirm the lack of influence the PAF was conducted both with and without outlier cases. The results showed very little difference in all key tests of factorability, no differences in the main variables loading onto the major factors, and only minimal differences between the weaker loading factor variables. All outliers were considered not to be problematic and were therefore retained (Allen & Bennett, 2012; Tabachnick & Fidell, 2007).

8.3.1.4 The factorability of variables

Factorability is assessed with reference to the correlation of variables, the absence of multicollinearity and measures of sampling adequacy (MSA). Inspection of the bivariate correlation matrices (Pearson's *r*), found most variables had correlations above .3 signalling their suitability for factor analysis. The following 5 variables had only small correlations (<.3) which suggested they were unlikely to load onto any underlying related factors. Investigations will later support this early observation.

(1) 5c.Students tend to spend more time on group tasks than they would if working alone
(2) 5d.I prefer to select my own group rather than being allocated to a group
(3) 5f.Sometimes I feel reluctant (apprehensive) about expressing my ideas in a group
(4) 5g.I would rather work with the same group all semester completing various tasks
(5) 9i.Individuals tend to rely on the lecturer/tutor to confirm the groups' treatment of a problem

While strong correlations form the basis of a reliable factor analysis, it is equally important for PAF that multicollinearity[65] does not cause the statistics to become unstable (Tabachnick & Fidell, 2007). However, multicollinearity was not a problem. Inspection of the collinearity statistics showed all tolerance levels were well above the 0.1 benchmark and no variables had a variance inflation factor (VIF) greater than 5 (Allen & Bennett, 2012). Table 8.10 presents the favourable factorability statistics for the final data set using pairwise deletions. Bartlett's test of sphericity is significant, the Kaiser-Meyer-Olkin MSA is greater than .6, and all MSAs in the anti-image correlation matrix diagonals exceeded the accepted level of .5.

[65] Variables that are too highly correlated (>.9).

Table 8.10 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.868
Bartlett's Test of Sphericity	Approx. Chi-Square	4278.816
	df	820
	Sig.	.000

8.4.2 Principal Axis Factoring

The first attempt at factor extraction was undertaken using principal axis factoring (PAF) and an oblique (promax) rotation, on the 41 scaled variables in part A (questions 5, 9, 10 and 11)[66]. Rotation helps to clarify which variables belong to which factors (de Vaus, 2002) by redistributing the respective variances. The choice to use either an orthogonal or oblique rotation usually depends on whether the factors are expected to be correlated (oblique) or uncorrelated (orthogonal) (Allen & Bennett, 2012). The initial factor correlation matrix for the current data set suggested that extracted factors were not highly correlated. However, Tabachnick and Fidell (2007) recommend using an oblique rotation in the first instance. Theoretically it is more sensible, provides a more interpretable solution and 'a more realistic representation of the data' (Fabrigar & Wegener, 2012, p. 78). The oblique promax rotation is particularly suited to the current situation because it begins with the varimax orthogonally rotated solution then rotates again, allowing for any correlations among the factors. If there are few factor correlations, the solution will remain mostly orthogonal (Tabachnick & Fidell, 2007).

Initially, the factor matrix attempted to extract 9 factors where initial eigenvalues[67] were greater than one. The total variance explained was 51.471%. However after rotation, further examination of the pattern matrix[68] indicated that 4 of these factors were only loading with one or two variables. Furthermore the extraction sums of squared loadings (as shown in Table 8.11) indicated that only 5 factors should be retained.

[66] Questions 6-8 were individual questions and will be analysed later.

[67] 'The eigenvalue of a factor is the amount of variance in all the variables that is explained by that factor…[it] is obtained by squaring the correlations in the factor matrix' (de Vaus, 2002, p. 188). The eigenvalue greater than one rule of thumb for extracting an appropriate number of factors was observed.

[68] The pattern matrix represents 'the unique contributions of each factor to the variance in the variables' (Tabachnick & Fidell, 2007, p. 627).

Table 8.11 Total variance explained for group work scaled variables

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of sq.loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.940	26.683	26.683	10.515	25.647	25.647	9.375
2	3.661	8.928	35.611	3.159	7.705	33.352	7.898
3	2.275	5.550	41.161	1.796	4.381	37.733	3.540
4	1.965	4.793	45.953	1.442	3.518	41.251	3.958
5	1.624	3.962	49.916	1.185	2.891	44.142	2.349
6	1.430	3.489	53.404	.944	2.302	46.445	1.340
7	1.234	3.011	56.415	.729	1.777	48.221	1.438
8	1.134	2.766	59.181	.677	1.650	49.871	4.356
9	1.108	2.702	61.883	.656	1.600	51.471	1.650
10	.962	2.347	64.230				

Extraction Method: Principal Axis Factoring.

The PAF was re-run a number of times, sequentially eliminating one potentially problematic variable at a time. Each decision was based on the fact that non-linearity and the influences of minor factors can result in 'a lack of fit' otherwise known as the '*error of approximation'* (Fabrigar & Wegener, 2012, p. 54).

In total, 9 variables were removed from the analysis, leaving 32 items to be reduced to common factors. Table 8.12 lists the sequenced steps and final decision rules used in the process of eliminating the potentially redundant variables. It is important to note that the logical sequence of elimination was critical to achieving a successful outcome. It became apparent that any attempt to short-cut the process and drop cross-loading factors before all singularly loaded variables had been dealt with caused some correlations to be overlooked or prematurely eliminated. This is due to the fact that 'a variable may correlate with one factor through its correlation with another factor, rather than directly' (Tabachnick & Fidell, 2007, p. 649). Unpacking complex relationships required a systematic approach to account for the masking of structures by extraneous variables.

Table 8.12 PAF decision rules and outcomes

Steps	Decision rule	Variables	Details
1	*Run PAF*	Pairwise deletions; Promax rotation	9 factors with initial eigenvalues >1 5 major factors & 2 minor factors
2	Remove variables with low bivariate correlations (<.3)	5c. Students tend to spend more time on group tasks than they would if working alone	- all correlations <.3 - very low communality (.157) - did not load onto a factor - bi-modal distribution
		5d. I prefer to select my own group rather than being allocated to a group	- all correlations <.3 - loaded onto a minor factor (with 5g)
		5f. Sometimes I feel reluctant (apprehensive) about expressing my ideas in a group	- all correlations <.3 - marginally loaded (as negative) onto factor 4 (-.303)
		5g. I would rather work with the same group all semester completing various tasks	- all correlations <.3 - loaded onto a minor factor (with 5d)
		9i. Individuals tend to rely on the lecturer/tutor to confirm the groups' treatment of a problem	- all correlations <.3 - loaded onto factor 9 alone
3	*Re-run PAF*		7 factors with initial eigenvalues >1 5 major factors & 2 minor factors
4	Remove variables loading onto minor factors only	9j. Over the course of group work projects we don't normally have a problem with conflict	- loaded onto a minor factor (with 9c)
		10d. Group work stimulated me to work beyond minimum requirements	- loaded onto a minor factor (with 10c)
5	*Re-run PAF*		6 factors with initial eigenvalues >1 5 major factors & 1 minor factors
6	Remove cross-loading variables	9c. Generally group members are very supportive and encouraging of each other	- loaded onto 2 factors (f2 & f6)
		9f. Working in groups is a satisfying experience	- loaded onto 2 factors (f1 & f2)
		9l. Group work helps to build new friendships	- loaded onto 2 factors (f1 & f2)
		10e. It's more equitable to assess individuals than groups	- loaded onto 2 factors (neg.f2 & f3)
7	*Re-run PAF*		5 major factors – all

8.4.3 Five-factor solution

Finally, five factors were identified as providing the underlying latent construct for 30 of the 41 survey items in questions 5, 9, 10 and 11. Cumulatively, these five factors explained 49.2% of the variance in the data, which is consistent with other educational and applied psychology studies (Henson & Roberts, 2006)[69]. Table 8.13 shows how the total variance is explained with reference to eigenvalues greater than one. Notably the extracted sums of squared loadings appears to show factor 5 loses some of its explanatory power when the five factors are extracted (eigenvalue = .887). However, this is an unadjusted percentage of variance and does not account for the full potential of the factor analysis after rotation (Cohen et al., 2007). Fabrigar and Wegener (2012, p. 646) explain that 'there are good reasons for retaining factors of marginal reliability', not the least of which is the inherent flaws of eigenvalues when used with common factor analysis. Henson and Roberts (2006, p. 410) recommend using 'multiple criteria when determining the number of factors to retain [and to] avoid overdependence on the EV>1 rule'. Subsequent removal of factor 5 variables and the attempted extraction of 4 common

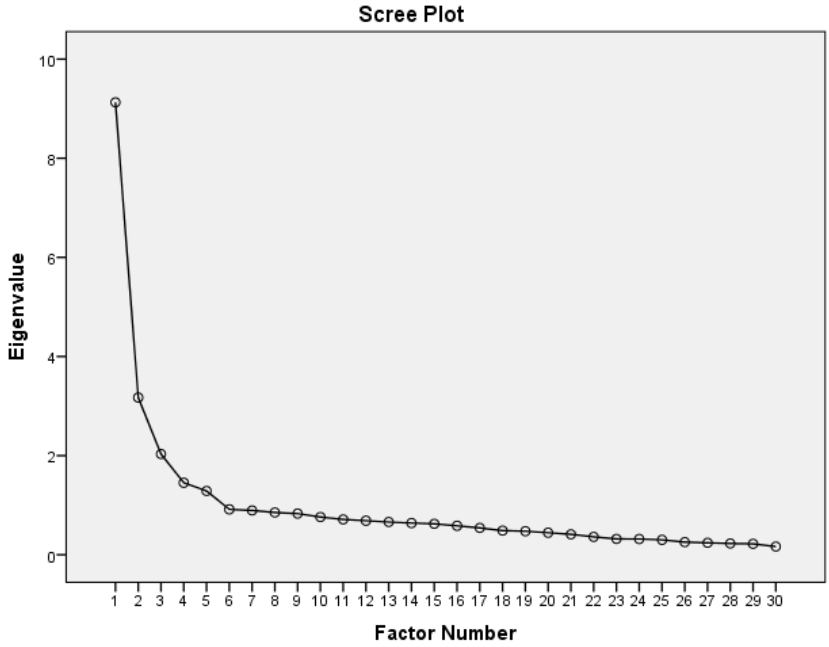
Table 8.13 Total variance explained for final five-factor solution

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of sq.loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.128	30.428	30.428	8.653	28.843	28.843	8.050
2	3.172	10.573	41.001	2.647	8.823	37.666	6.290
3	2.032	6.773	47.774	1.573	5.242	42.907	2.847
4	1.453	4.842	52.616	1.000	3.332	46.240	3.649
5	1.287	4.289	56.906	.887	2.957	49.196	2.101
6	.916	3.052	59.958				
7	.893	2.977	62.935				
8	.852	2.841	65.776				
9	.830	2.768	68.544				
10	.761	2.535	71.080				

Extraction Method: Principal Axis Factoring.

[69] Henson and Roberts (2006) suggests that a 75% explained variance benchmark is an unreasonable expectation for educational and applied psychological research. In their examination of 432 articles the average total variance explained by extracted factors was 52.03%.

Figure 8.3 Scree plot for group work five-factor solution



factors caused the model to shrink to three major and one minor factor and in turn exposed additional cross-loading variables. In this case it was clear that the five-factor solution was the best fit. Furthermore, the main item in factor 5 (Q9g) had a strong factor loading of 1.035[70]. All attempts to reduce the number of factors (under-factoring) or extend them (over-factoring) lead to results that were not interpretable. The scree test supports a clear five-factor solution. Although one factor is clearly dominant, explaining 28.84% of the variance, the plotted eigenvalues show the last dip in the graph occurs after factor 5, before levelling out (see Figure 8.3).

Overall the final Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.889, which far exceeds the 0.6 benchmark, and the Bartlett test of sphericity was significant (χ^2 (df=435) = 3019.276, $p < .001$). Communalities, as shown in Table 8.14, reflect the proportion of variance explained by the factors for each of the 30 variables (extracted communalities). Although communality coefficients for eight variables were moderately low (ranging between 0.277 and 0.389), none were considered too low to be useful or not related to other variables in the set (Tabachnick & Fidell, 2007).

[70] 'It is possible for a coefficient to be greater than 1 because the oblique rotation is similar to a standardized partial regression coefficient'(Fabrigar & Wegener, 2012, p. 136).

Table 8.14 Communalities for 30 Group work variables in the 5-factor solution

	Initial	Extrac-tion
5a.Group work promotes collegiality within the class	.512	.422
5b.It is difficult for students to find a mutually convenient time to meet	.332	.294
5e.It's best to have a diverse mix of students within a group (eg abilities; age; ethnicity)	.368	.312
9a.In general my group experiences have improved my ability to get along with others and understand things from their point of view	.537	.541
9b.I do not believe that my group experiences have contributed to the development of teamwork skills	.379	.357
9d.Group experiences help to develop communication skills	.528	.569
9e.Group experiences help to develop critical thinking skills	.596	.623
9g.It's difficult keeping track of all ideas and information contributed	.493	.987
9h.It’s difficult to reliably monitor and evaluate group processes	.530	.484
9k.Communication is the key to making group work succeed	.464	.411
10a.Some group members participate more than others	.553	.559
10b.Dominant individuals tend to take control	.522	.535
10c.Group work encourages students to take responsibility for their own learning	.558	.471
10f.It's difficult to achieve equal contribution from group members if their technical skills are inadequate.	.362	.339
11a.I learned more about complex accounting issues by working in groups than I would have learned on my own.	.554	.513
11b.It's easier to understand difficult accounting concepts by working through problems yourself.	.285	.277
11c.In my view, the group experience makes a subject more enjoyable	.756	.703
11d.Working with others helps me to master course material	.703	.638
11e.Group work hinders students' ability to think and act independently	.369	.415
11f.Groups simply divide the work between individuals rather than working collaboratively	.324	.325
11g.More ideas are generated when working in a group	.555	.523
11h.I can see how group work is an important part of learning at university.	.500	.408
11i.I felt I did not learn anything new during group sessions.	.455	.451
11j.With group work we always help each other.	.544	.503
11k.I don't like relying on other people for my marks.	.420	.389
11l.I generally feel confident in the ability of my teams.	.559	.552
11m.I was very much aware that my group needed me and I needed them to successfully complete the task.	.412	.384
11n.My group works effectively together.	.619	.551
11o.We provide meaningful feedback to each other on the success or otherwise of the group effort.	.596	.581
11p.Any group assessment that I have done has been better prepared than if I had done it myself.	.644	.643

Extraction Method: Principal Axis Factoring.

Table 8.15 Pattern Matrix[a] for 30 group work variables in the 5-factor solution

Variables	Factor				
	1	2	3	4	5
11l.I generally feel confident in the ability of my teams.	.852				
11o.We provide meaningful feedback to each other	.800				
11n.My group works effectively together.	.780				
11j.With group work we always help each other.	.736				
11m.Very much aware that my group needed me and I needed them	.735				
11p.Any group assessment that I have done has been better prepared than if I had done it myself.	.717				
11a.I learned more about complex accounting issues by working in groups than I would have learned on my own.	.690				
11c.In my view, the group experience makes a subject more enjoyable	.661				
11d.Working with others helps me to master course material	.601				
11g.More ideas are generated when working in a group	.544				
10c.GW encourages studs to take responsibility for their own learning	.505				
11h.I can see how GW is an important part of learning at university	.372				
9d.Group experiences help to develop communication skills		.885			
9e.Group experiences help to develop critical thinking skills		.756			
9k.Communication is the key to making group work succeed		.653			
9a.In general my group experiences have improved my ability to get along with others and understand things from their point of view		.587			
5a.Group work promotes collegiality within the class		.469			
5e.It's best to have a diverse mix of students within a group		.458			
10b.Dominant individuals tend to take control			.739		
10a.Some group members participate more than others			.716		
11k.I don't like relying on other people for my marks.			.587		
10f.It's difficult to achieve equal contribution from group members if their technical skills are inadequate.			.539		
5b.It is difficult for students to find a mutually convenient time to meet			.387		
11e.Group work hinders students' ability to think and act independently				.693	
11b.It's easier to understand difficult concepts by yourself				.565	
11i.I felt I did not learn anything new during group sessions				.507	
11f.Groups simply divide work between individuals				.500	
9b.I do not believe that my group experiences have contributed to the development of teamwork skills				.357	
9g.It's difficult keeping track of all ideas and information contributed					1.035
9h.It’s difficult to reliably monitor and evaluate group processes					.471

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Table 8.15 presents the pattern of coefficients for the final 30 group work variables that make up the dataset. The loading of variables in the matrix is grouped into the respective factors and listed in order of strength, providing a very clear and interpretable 5-factor solution. Most notably, with a cutoff of .30 for inclusion (meaning small absolute values of less than .30 were suppressed) (Coakes et al., 2009), there are no complex or cross-loading variables. Given the oblique (Promax) rotation employed, these coefficient loadings are a measure of the unique relationship between the factor and each of the respective variables (not the correlation between the factor and the variable). The higher the coefficient the more pure measure it represents. Coakes et al. (2009, p. 137) claim that pure variables are any of those with 'loadings of .3 or greater on only one factor'. Since all variables are in excess of .35 and loading on only one variable, they can all be considered pure and therefore more easily interpretable (Tabachnick & Fidell, 2007).

Finally, to measure internal consistency, and to statistically establish the construct reliability for each of these five latent factors, Cronbach's alpha coefficient was used. Notably, with 95% confidence intervals, Cronbach's alpha exceeded the benchmark 0.7 (de Vaus, 2002) in four of the five factors, as shown in Table 8.16. Only factor four 'individuality' was marginally lower at α=.680 but, as mentioned earlier in this chapter, this still represents an acceptable level (Leung, Ginns & Kember, 2008; Schmitt, 1996).

Next, the following section will interpret the underlying dimensions of each factor. As Fabrigar and Wegener (2012, p. 65) explain 'ultimately, a factor analysis model is only useful if it provides a conceptually sensible representation of the data'.

Table 8.16 Reliability statistics for the five-factor solution

Factor	Construct label	N of Items	Cronbach's Alpha
1	Interdependence	12	.918
2	Skills	6	.807
3	Personal	5	.724
4	Individualism	5	.680
5	Process difficulties	2	.705

8.4.4 Interpreting the factors

The interpretive construct labels assigned to each factor, as listed in Table 8.16, are: (1) interdependence, (2) skills, (3) personal, (4) individualism, and (5) process difficulties. The aim of this section is to highlight the characteristics and other distinguishing features of each factor, and in subsequent sections calculate standardised factor scores using the Anderson-Rubin procedure, to measure students' perceptions of each construct.

8.4.4.1 Factor 1: Interdependence

Consistent with the theory of social interdependence, most items from question 11 loaded strongly onto the first factor (as shown in Table 8.15) and can meaningfully be called the 'interdependence' construct. It consists of 12 items which together have a Cronbach's alpha of 0.918. In order of loading size, the dimensions of interdependence are:

1. Confidence in the team's ability
2. Meaningful feedback
3. Effective group work
4. Help each other
5. Aware of reciprocity (needing each other)
6. Better performance outcomes in a team than alone
7. Learn more in a team than alone
8. Subject more enjoyable
9. Helps to master course material
10. Generates ideas
11. Encourages responsibility for own learning
12. Important to university learning.

Clearly, the lowest loading variable (Q11h 'I can see how group work is an important part of learning at university') with a coefficient of 0.372 is not as unique to the interdependence construct as the higher loading and theoretically supported areas of confidence (0.852), feedback (0.800), effectiveness (0.780), help (0.736), and reciprocity (0.735), perceived amongst group members. It is conceivable that skill development (factor 2) could also be seen as a reason for group work being important to university learning. Therefore the relative weakness of the lowest loading variable and the respective positions of each variable in order is logically supported as well as statistically supported in the data (Allen & Bennett, 2012).

8.4.4.2 Factor 2: Skill development

Factor 2 features items related to skill development such as communication skills, critical thinking skills, and interpersonal skills, and is therefore labelled the 'skill development'

construct. Comprising a total of six variables, the skill development dimension includes four items from the group processing set in question 9 and two items from question 5, originally identified as group formation type variables (as shown in Table 8.15). It is worth noting that both question 5 items have relatively lower coefficients (.469 and .458), than the other skill component extracted from the question 9 scale items; however, their inclusion in this 'skills development' construct is logically sound. Students perceived the following skill aspects of group work in the same way:

1. Group experiences help to develop communication skills
2. Group experiences help to develop critical thinking skills
3. Communication is the key to making group work succeed
4. In general my group experiences have improved my ability to get along with others and understand things from their point of view
5. Group work promotes collegiality within the class
6. It's best to have a diverse mix of students within a group.

Notably, all items that combine to represent the underlying construct for the 'skills' factor, are outcome focused, including the promotion of collegiality and diversity in class (question 5 items). The central theme is very clearly grounded in an emphasis on skill-based learning outcomes, as opposed to task or product outcomes. However the information gained from the factor analysis is simply summarising a large number of variables into a single, more meaningful construct, and therefore students' perceptions and experiences of skill development within the context of group work in their accounting studies, will be examined later in section 8.5.

8.4.4.3 Factor 3: Personal values and attributes

Conceptually the five items that make up factor 3 relate to issues of personal values and attributes, and are labelled 'personal'. These included:

1. Dominant individuals
2. Free-riders (where some group members participate less than others)
3. Reliance on others for marks
4. Ability to contribute
5. Time commitment.

In general, attitudes towards others, work ethic, commitment, and technical ability to contribute equally within a group environment, underpin this construct. As outlined earlier in Chapters 2 and 3, these personal characteristics of individual group members are often identified as the reason for conflict and dysfunctional group work experiences.

Further analysis will highlight how personal qualities, in combination, influence perceptions of the group work experience for accounting students.

8.4.4.4 Factor 4: Individualism

Factor 4 variables represent the construct called 'individualism' since they commonly share a distinct preference to working individually rather than cooperatively or collaboratively, within a group. Without the benefit of the statistically supported factor extraction, it is reasonable to suggest 'individualism' might be considered a personal attribute, closely related to the dimensions highlighted above in factor 3. However, as displayed in Table 8.15, this construct represents its own distinct focus on individual learning, rather than individual personality aspects. The five variables that make up factor 4 include:

1. Group work hinders students' ability to think and act independently
2. It's easier to understand difficulty concepts by yourself
3. I felt I did not learn anything new during group sessions
4. Groups simply divide work between individuals
5. I do not believe that my group experiences have contributed to the development of teamwork skills.

Whereas the factor 2 'skills development' construct focused on learning outcomes, here factor 4, 'individualism', centres on the process of learning. The higher loading variables numbered 1-3 in the above list (loading at .739, .716, and .587 respectively), clearly establish the learning process focus. Notably the fifth and weaker loading variable, relating to the lack of teamwork skills being developed (.357), might arguably be considered a 'skill' type variable. However, the emphasis of this variable is the lack of teamwork skills development and therefore, conceptually (and statistically), is a better fit with individual learning, since the teamwork skills outcome has not been achieved.

8.4.4.5 Factor 5: Process difficulties

Finally, two variables (Q9g and 9h) load onto factor 5. These both also provide a measure of group process. Specifically:

1. It's difficult keeping track of all ideas and information contributed; and
2. It's difficult to reliably monitor and evaluate group processes.

The common feature in both variables is the difficulty they express regarding different group processes. Therefore, the fifth and final factor is labelled 'process

difficulties'. Being the fifth and final dimension in the five-factor PAF solution means that it is statistically not as strong. However, as discussed earlier, it is consistent with a literature that has evolved from the premise that group processes and processing is complex and difficult (Jaques & Salmon, 2007; Johnson & Johnson, 2013).

8.5 Analysing the underlying constructs

The numbers assigned to each of the factors in Table 8.15, and the manner in which these factors have been extracted, relate to the strength of the variance in the measured variables, and is not an evaluation of the actual responses (Fabrigar and Wegener, 2012). To facilitate further analysis of these underlying constructs, refined scale scores are derived using the Anderson-Rubin method, in SPSS (DiStefano, Zhu & Mindrila, 2009). As the subsequent standardised scores are a summary of each participant's response to the group of questions that make up the latent factor, factor scores need to be 'interpreted in relative rather than absolute terms' (de Vaus, 2002, p. 192). Therefore, Table 8.17 presents the mean ranking of the standardised composite factor scores, showing the average level of agreement for each factor, relative to the other constructs.

Table 8.17 shows that, on average, there was most agreement for the survey questions related to personal attributes. Not surprisingly, this suggests that students are unified, by strong agreement, that the personal traits and values of their peers is what impacts their experiences and perceptions of group work in accounting. For this reason the majority do not like relying on others for their marks. They perceive that some participate more than others, and equal contribution is difficult to achieve when technical skills are inadequate, and/or dominant individuals take control. It is also strongly agreed that mutually convenient times to meet are difficult to arrange due to other personal commitments and priorities of individuals.

Notably, individualism, where group work is perceived as a hindrance to learning and skill development, has least agreement, on average. In fact, as shown in Table 8.17

Table 8.17 Standardised score means ranking for the 5 group work factors

	Skill Components	N	MEAN	Std. Deviation
1	Personal	209	0.04489	0.93565
2	Process difficulties	209	0.01468	1.00238
3	Skills	209	0.01411	1.00477
4	Interdependence	209	0.00994	0.99825
5	Individualism	209	-0.00970	0.98218

the negative mean score indicates that on average students disagree with the individualistic preference. This is also consistent with prior literature that reports accounting students' general satisfaction and appreciation of the learning and skill development opportunities afforded them in group work activities (Baird & Munir, 2015; Ballantine & McCourt Larres, 2009; Gammie & Matson, 2007), despite the difficulties encountered. The ranking of process difficulties as second in terms of average agreement (see Table 8.17), is testament to the ever present obstacles that form part of the group learning environment.

Interdependence's fourth placement in the ranking of the standardised factor score means suggests that there is less agreement with the expectations of reciprocity and mutual benefit in group work.

8.5.1 The influence of demographic characteristics

One-way between groups analysis of variance (ANOVA) was used to examine the influence that students' demographic characteristics may have had on the EFA outcome. For the demographic variables, gender[71] and age, there were no significant differences in perceptions of males and females or students' of different ages (see Table 8.18). However, as shown in Table 8.18, statistically significant differences were detected for language, culture, university and deferred university studies.

Specifically, language and culture had a highly significant influence on the way in which interdependence (η^2 = .062, f =.26 & .079, f =.29 respectively), skills (η^2 = .056, f =.24 & .104, f =.34), and the personal elements (η^2 = .143, f =.41 & η^2 = .159, f =.44) of group work were perceived ($p < 0.005$). According to Cohen (1992), the effect size (ES) for ANOVAs with the aforementioned eta-squared (η^2) signifies that language and culture had a medium effect on the variability of attitudes to the interdependence construct; a medium to large effect on the skills component; and a large effect in relation to personal attributes and values. Consistent with earlier findings, culture and language are significantly related (see section 8.1.2).

The descriptive means displayed in Table 8.18 highlight the divergence between students who speak English at home and students for whom English is a second language (ESL) and not practised in their home. For ESL students there is significantly greater

[71] Independent samples *t* test confirmed the ANOVA F-test results for dichotomous variables, gender, language, and deferred university studies. The *t*-test and F-test similarly compare the mean differences between groups (de Vaus, 2002).

agreement regarding the interdependent and mutually beneficial aspects of group work, than for their English speaking counterparts; and similarly ESL students regard the skills development opportunities of group work more highly. The negative coefficients for the composite means of native English speakers suggests the opposite is true for this group. In relation to personal attributes however, such as commitment and the impact of technical ability, free-riders, and dominant personalities, English language students rate the impact of these aspects of group work more highly, on average, than ESL students.

To further understand the nature of the differences uncovered between the various cultural and ethnic groupings, post hoc analyses with Tukey's HSD (α=.05) were examined. The post hoc comparisons revealed that students from Oceania countries (Australia & New Zealand) were significantly different on all three components. Specifically, for interdependence, Oceania students had significantly lower scores than students from North East Asia (China & Hong Kong) (p = .001); with regard to skills development, Oceania students differed significantly to each of the other three groups: SE Asian students (p = .000), NE Asian students (p = .014), and all others (including the Middle East, India, and Africa) (p = .038). For personal aspects, the significant difference existed between Oceania and SE Asia (Malaysia, Thailand, Vietnam, Indonesia) (p = .006), and between Oceania and NE Asia (p = .000). In both cases, Asian students indicated lower scores for the influence of personal attributes on their group work experience, than the Australian students, which is consistent with the findings for language, discussed previously.

Results also indicated that the university attended had a highly significant influence on how process difficulties were interpreted ($p < 0.005$), and was marginally significant in relation to the 'skills' construct, and the perception of 'individualism' ($p < 0.05$). Effect sizes are considered medium for each of these comparisons, f = 0.27, 0.21 and 0.19 respectively (Cohen, 1992). The post hoc tests confirmed that all significant differences in the statistics, i.e. for process difficulties, skill development and individualism, originated from students at Uni B. The negative factor score average of -0.5411 (SD = 0.95) for process difficulties indicates that students at Uni B did not identify with issues in monitoring group processes in the same way as students at the other two institutions, Uni A (M = 0.1985, SD = 0.94) and Uni C (M = 0.0065, SD = 1.02). Likewise with the construct of individualism, students at universities A and C similarly agreed that group work is not a hindrance to achieving their individual

Table 8.18 Standardised factor score means for the demographic characteristics of students

	Group work constructs									
	1 Interdependence		2 Skills		3 Personal		4 Individualism		5 Process difficulties	
	Mean	*F*	Mean	*F*	Mean	*F*	Mean	*F*	Mean	*F*
Gender										
Male	0.0165	0.017	-.0978	1.555	-0.0126	0.492	0.0621	0.609	0.0004	0.080
Female	-0.0017		0.0765		0.0798		-0.0449		0.0401	
Age Groups										
18 to 21	0.0201	3.101	0.0537	0.623	0.2203	2.225	0.0519	0.257	0.0196	2.370
22 to 25	0.0643		0.0326		-0.1635		-0.0382		0.1265	
26 to 29	0.2049		-0.3734		0.0027		0.1181		-0.8051	
30 to 44	-0.8132		-0.1940		-0.0334		-0.1975		0.0962	
45 to 64	-0.1443		-0.1246		0.6000		0.0663		0.0597	
Language										
English	-0.2065	13.439***	-0.1938	12.140**	0.3424	34.255**	0.0404	0.361	-0.0431	1.158
Other	0.2839		0.2839		-0.3759		-0.0421		0.1083	
Culture										
Oceania	-0.2474*	5.788**	-0.2910*	7.876**	0.3675*	12.827***	0.0339	0.465	0.0202	1.058
All others	-0.0882		0.5205		0.2546		-0.3287		-0.4048	
SE Asia	0.1909		0.4592		-0.1914*		0.0266		-0.0552	
NE Asia	0.3925*		0.1909		-0.4874*		0.0062		0.1543	
University										
Uni A	-0.0806	1.185	-0.1043*	3.691*	0.0331	0.142	-0.0839	4.679*	0.1985	7.213**
Uni B	0.2181		0.4328*		-0.0118		0.4607*		-0.5411*	
Uni C	0.0436		-0.0081		0.0872		-0.1176		0.0065	
Defer uni										
Yes	.1564	6.068*	-0.0461	0.643	0.0427	0.000	0.0233	0.076	0.1579	4.856*
No	-0.1833		0.0657		0.0456		-0.0144		-0.1462	

* $p < 0.05$
** $p < 0.005$
*** $p < 0.001$

learning goals (*M* = -0.0839, *SD* = 0.89; and *M* = -0.1176, *SD* = 1.07, respectively). However, on average, students at Uni B were more individualistic in their perceptions of group work (*M* = 0.4607, *SD* = 0.94). With the skill development construct, the positive outlook of UniB students (*M* = 0.4328, *SD* = 0.84) was significantly different to students at UniA, who did not agree that group work helped develop generic skills (*M* = -.1043, *SD* = 0.85).

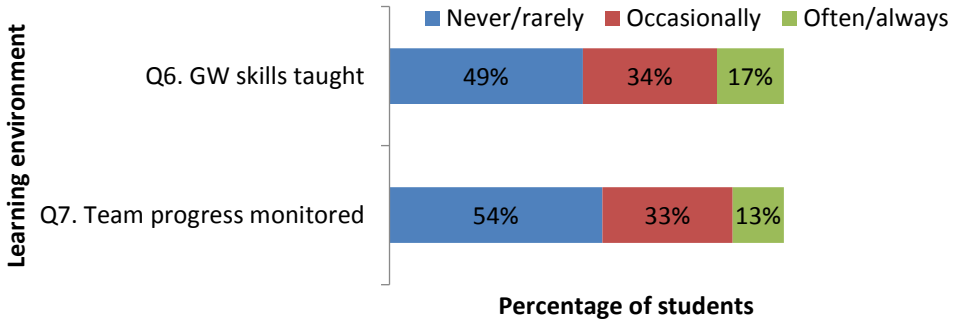
Finally, student perceptions of interdependence and process difficulties were also influenced by whether or not they had previously deferred their university studies, *F* (1,205) = 6.068, *p* = 0.015, η^2 = 0.029 and , *F* (1,205) = 4.856, *p* = 0.029, η^2 = 0.023 (respectively), although by convention the effect size for both conditions is small (Cohen, 1992). The findings suggest that the concept of interdependence is perceived more positively by students who deferred their university studies, although the same group of students agree that it is also difficult to appropriately monitor and evaluate group

processes and to keep track of the ideas and information contributed in the group situation.

8.5 Perceptions of support and future career requirements

In this exploratory analysis of what group work means to accounting students, it was also important to identify students' perception of the teaching context within their learning environment. The higher education literature strongly supports the assertion that student perceptions are influenced not only by prior experiences and the learning context, but simultaneously by the teaching context (Biggs, 2003; Entwistle, 2010; Marton & Booth, 1997; Prosser & Trigwell, 1999; Ramsden, 2003; Trigwell & Prosser, 1997). Therefore, two individual questions in the student survey focused on their perception of the frequency with which group work skills are specifically taught in accounting classes and the extent to which team progress is monitored by the lecturer/tutor. Nearly half (49%) of all students across all three research sites suggested that teamwork skills are never or rarely taught; while more than half (54%) of the sample respondents perceive that progress during group work tasks is never/rarely monitored by the teaching staff (see Figure 8.4). Not surprisingly these frequency results were statistically significant, p = .000[72].

Figure 8.4 Frequency of group work skills being taught and monitored in accounting



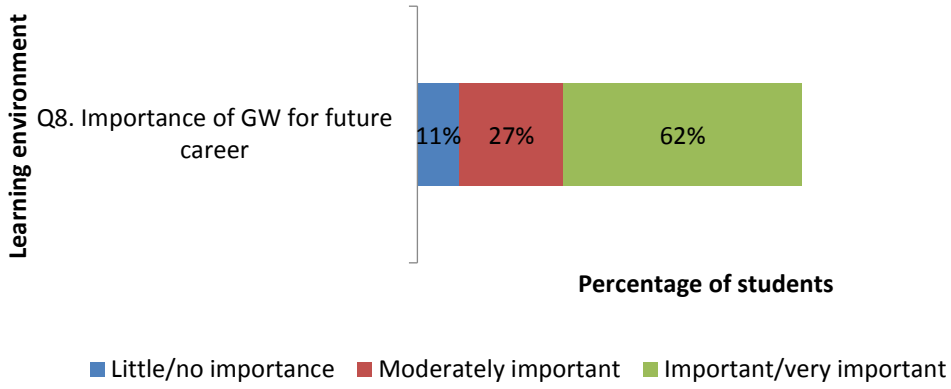
[72] Due to the ordinal nature of the data, both parametric and non-parametric tests were conducted. The chi-square test for goodness of fit was significant, $\chi^2(5, N = 223) = 119.16$, $p < .001$, and $\chi^2(4, N = 223) = 84.063$, $p < .001$ (respectively), as was the one sample t test, $t(222)=34.55$, $p = .000$; $t(222)=36.17$, $p = .000$ (respectively). The sample size for the student survey responses means that the parametric tests are equally robust and resulted in the same level of significance as the non-parametric tests.

One way analysis of variance (ANOVA) was again used to test whether responses differed across the three case study sites. The results of the ANOVA indicated that there was no significant difference in student perceptions about the lack of teaching of group work skills or training in group processes (Q6). However, in relation to the monitoring of team progress throughout a group task (Q7), there was a significant difference across the different cohorts, F (2,220) = 11.948, p = .000, η^2 = 0.099. This is a medium effect size (Cohen, 1992).

Post hoc tests using Tukey's HSD (α=.05) confirmed that it was Uni B students (M = 3.0541, SD = .9412) who had significantly higher scores than their counterparts at Uni A (M = 2.3084, SD = .9849) and Uni C (M = 2.1646, SD = .8687). The results can be simply interpreted as Uni B students perceiving group work as occasionally monitored by lecturers, whereas, on average, students at Uni A and C indicated that they are rarely explicitly monitored in their groups.

Despite the perception that teamwork skills are generally not taught or monitored within accounting classes, Figure 8.5 shows that the majority (62%) of student respondents agree that group work skills at university are important/very important for their future careers and/or job opportunities (Q8). In relation to question 8, the ANOVA and associated post hoc tests revealed a marginally significant difference existed between the opinions of students at Uni A and B (F (2,220) = 3.594, p = .029, η^2 = 0.032). On average, group work was considered significantly more important to Uni B students (M = 4.0541, SD = .9112) than for students at Uni A (M = 3.5888, SD = 94123), although effect size is small.

Figure 8.5 Students' perception of the importance of group work skills



As expected, student opinions about the importance of group work for their future prospects (Q8) were strongly and positively correlated to their perception of whether or not group work should be included in the accounting curriculum (Q3), r (222) = .468, p < .001.

8.6 Chapter summary

This chapter analysed the quantitative data collected from student respondents at each of three case study research sites. The data highlighted important similarities and differences of opinion. In general, it was found that group work is often used in accounting, and is considered to be more prevalent than in other business disciplines. Sixty two percent of the student participants in this study agreed that group work at university was important to their future careers, although only 45% believed group work should be used in accounting units. This apparent discrepancy highlights an important area to be researched further in the in-depth student interviews to follow. An indication of potential conflict within students' experiences is that for many students, it is perceived that group work skills are not taught or monitored by their accounting lecturers.

Contributing to the theoretical knowledge base of group learning in accounting education, this chapter also examined the underlying latent structure of the questionnaire items. It found five key factors underpinned students' perceptions and experiences of group work in accounting: interdependence, skills, personal attributes, individualism, and process difficulties. Significantly, cultural demographic characteristics as well as the university attended was found to influence the outcome of the factor analysis. This is an important finding as international students accounted for almost half the sample population, which is consistent with government statistics on Australia's overall international student population (AEI, 2014).

Finally, this chapter highlighted important similarities and differences in the demographic profile of accounting students across the three participating universities. The survey respondents from all three cohorts comprised around 60% females and 40% males, and although Uni B students were on average younger, there were no significant differences between all three case study sites in relation to student gender, age, cultural dispersions or the amount of time students spent on independent study and paid work. However, students at Uni B spent significantly more time on campus than the other two cohorts, and students at Uni A were the least advanced through their studies. Prior experiences and pathways into university study were measured by the propensity of

students to either defer university or enter straight from senior high school. Chinese and other North-East Asian students attending Uni C were more likely to have gone straight to university, whereas South-East Asian students at Uni A were more likely to have deferred their studies or taken other pathways into university.

The degree of convergent and divergent student characteristics across the demographically diverse participating institutions, provide an appropriate pool from which to draw interviewees for stage 2 of this study, particularly through the facilitation of the maximum variation strategy outlined in Chapters 4 and 5. The following chapter will report on the outcome of stage 2 and the phenomenographic analysis of the student interviews.

Chapter 9: Qualitative Analysis of Students' Perceptions and Experiences of Group Work: Case Study Interviews

9.0 Introduction

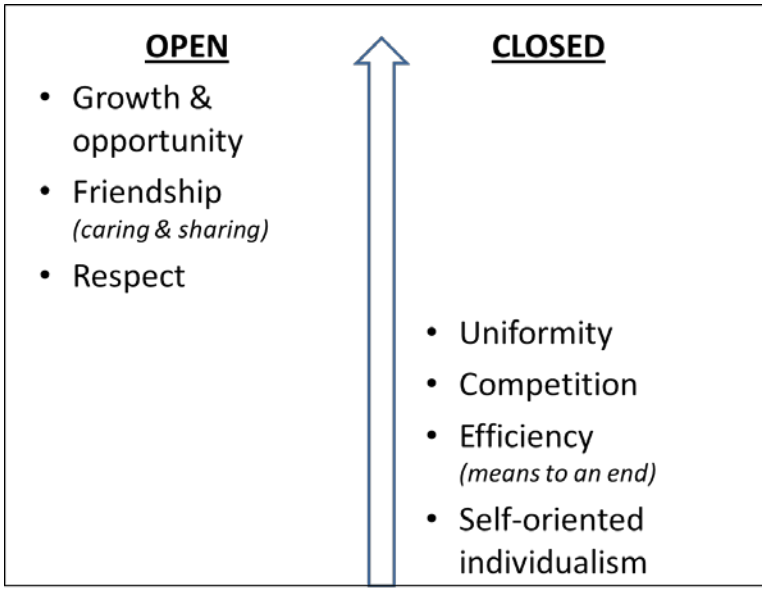
Using a phenomenographic approach to examine Research Question 3, this chapter will analyse accounting students' interview responses about the meaning of group work based on critical[73] differences. It will derive an inclusive hierarchy of their structure of awareness, firstly in the context of each of the three case studies, and secondly in combination, to enable the extraction of qualitatively different categories of descriptions for the sample group as a whole. The chapter is organised into five main parts. The first three parts will report on each of the case studies in turn and present individual diagrams of the preliminary analyses relating to how students in each university experienced group work in their respective accounting studies. Section four will present the results of amalgamating case study data and drawing out the key similarities and differences across all three locations, including unique contextual features. The final categories of description will subsequently be presented, with the structural hierarchy of the outcome space explained in the fifth section, followed by the chapter summary.

9.1 Approaches to group work: Case study 1

The preliminary referential categories extracted from the first case study have been labelled 'Approaches to group work' in Figure 9.1. This initial analysis of what group work means to the accounting students at Uni A produced a list of seven categories, which together describe the various approaches undertaken with group work in accounting. The seven qualitatively different categories were analysed for structure and any apparent relationship between them. The categories appeared to fall into two distinct groups: those who approached group work with an open mind and those who were closed to new opportunities for development and growth, and participated in group work activities with a determination to limit interaction to whatever it took to complete the task. The following analyses highlight the conceptual variations in experiences at Uni A.

[73] 'Critical' variation recognises the qualitatively different ways of understanding or experiencing a phenomenon, whereas 'non-critical' variation refers to slight differences within a category that does not essentially alter how that category is distinguished from another (Åkerlind et al., 2005).

Figure 9.1 Approaches to group work for students at CS1



9.1.1 Closed approaches

The closed approaches to group work included self-oriented individualism; efficiency (where group work is seen as a means to an end); competition; and uniformity (where similarity between group members was of paramount importance). As presented in Figure 9.1, there exists a hierarchical linear relationship between each of these closed approaches, beginning with the most closed minded self-oriented individualistic approach to group work, then building incrementally to a preference for a unified commitment with other like-minded peers to ensure the task is completed. All closed categories were performance focused.

9.1.1.1 Self-oriented individualism

Self-oriented individualism emphasises 'self' and individual/personal goals as being of central importance within the group situation.

> I've managed to do enough work to carry other people, which is another thing that upsets me 'cause I'm here for me, not here to help other people…. The issue for me is marks. I'm here to do as best I can and yeah, anything that is external to me, limiting that in any way, does upset me a fair bit (A2).

> You won't just change your ideas because of someone stand beside you trying to say, no that's wrong, you change. No it's not like that (A7).

However, individualism in the context of group work is not merely about a preference for working alone. In fact the opposite may be true. Those with a self-oriented

approach also acknowledge that sometimes it can be beneficial to work with others. Although notably this approach does not necessarily align to learning or developing skills, just getting better grades and ensuring the end result is better than it might have otherwise been.

> I would have to say I love that group because I didn't actually do anything but I got HD at the end (A7).

> When I look at the unit outline, group work, group work, group work, and it's the same group… The whole thing has been done in group work…I feel release. I don't feel any stress…I feel that I'm safe because I know that my friends or my group mate will back me up (A3).

Students also revealed that control features strongly for the self-oriented individualist, whether it is in relation to choosing group members, final results, or getting their point across. The underpinning notion is to do whatever needs to be done to advance personal interests and agendas. Notably, the welfare of others is not prominent in the rhetoric of the self-oriented student; and they commonly express strong emotions and frustrations with group work being unfair on them. Furthermore, the very nature of interacting with others can be considered somewhat of a nuisance.

> Allocated groups make me quite frustrated… because it takes the control out of my hands. You're at uni to get the best mark you can, to get the best job you can, is how I see it, and how a lot of people see it. I think that taking that control away from you is unfair (A2).

> I just want to prove I'm right (A7).

9.1.1.2 Efficiency

The efficiency category differs because it focuses on getting the task done in the shortest amount of time and generally with the least amount of effort. Group work is seen as a 'means to an end' in achieving that goal. Working with friends because it is easier to communicate (and because getting to know others takes too much time), and dividing up the work, are seen as efficient ways of completing assessment requirements. For example:

> Your group can collect different opinions and find the best way to solve the problem and saves a lot of time (A9).

> We prefer to choose our friends because I think it is easier to communicate and we know the person. We know how will he or she get things done efficiently or you know, hard working or lazy or basically rely on you….I mean, we can talk straight away forwards because in Asia we usually keep our things for our own, like in front

> of strangers, but to our friends, "hey this thing get it done now, now, now, I want tonight because the due date is here" (A3).

The concept of what constitutes group work is also quite broad for those with an efficiency perspective, for example 'group work' also means working together on individual assignments to achieve a better result.

> Sometimes it's individual work but we tend to take it as group work, for example, when it involves a lot of technical stuff and you can't do it alone and I reckon it's better we do it ourselves first but then we can discuss together whether we are come to the same conclusion, things like that…we learn more efficiently and because sometimes we can cover so many things and friends can help us (A3).

9.1.1.3 Competition

Competition is the category that describes students who take a competitive approach to group work, and their studies in general. These students exhibit many of the characteristics of the self-oriented individualistic approach but with one primary difference, they have to be the best. For these high achievers, the aim is not for a satisfactory pass nor is it to find an efficient way to complete an assignment; get good marks; or to do whatever will benefit them; it's about achieving the best result. In fact, even if a mark is poor, a competitive approach suggests that as long as it is still better than everyone else, it is fine. Therefore, competitors are not loners. They need others to compete against; they need to know their opposition, so a major theme in this category is the need to be always comparing performances, even within groups.

> When you like can look at your mark and see that it was so much better than other people's, it kind of makes you feel better, even if it was a bad mark for you, if you can see that it was still like kind of superior, it's kind of like, 'oh well now I feel better'. I'm always doing it (A11).

An interesting critical difference between the self-oriented individualism category and the competition category is that those in competition enjoy helping others in a non-competitive, non-assessed environment. The following extracts suggest that there are at least two motivators: (1) demonstrating superior knowledge; and (2) taking the opportunity to learn different strategies and approaches from others, to improve your own position. This competitive student indicated a preference for non-assessed informal group work.

> When we've just done group work in tutorials and stuff, I think I'm pretty good at explaining processes…you can't just say, 'oh I got 5 as my answer', you've got to

> tell them, 'this is how I did it'…sort of doing it step by step and that just being able to explain, that is the best thing…And then like being able to compare answers and seeing, 'oh well this is the steps where we differ', I think – yes (A11).

> [Group work friends] we're all very competitive and we want to get better marks than each other but we still do like help each other out. Like on Facebook we have a group message going between the three of us and we're always on there just talking about different assignments and even if it's not assessed work (A11).

9.1.1.4 Uniformity

Uniformity, similarity, and sameness, all describe this approach to group work where students perceive homogeneity as the key to meaningful group work in their accounting studies. The focus is not only on academic ability and performance levels attained, but also on sharing the same motivation levels, work ethic, goals, personalities and even living arrangements. There is a greater appreciation for the importance of working with others, although those with a preference for a uniform approach to group work focus on homogenous characteristics of group members, and not simply being compatible in a way that would require some acceptance of diversity and differences. Compatibility is more akin to rapport and friendship, which will be discussed later in section 9.1.1.6. The critical difference between uniformity and other categories is the perception that everyone in the group needs to be the same, and everyone needs to be 'on the same page', that is, in agreement.

> I think if you're well matched with your motivation level that really helps. Everyone's sort of thinking along the same lines and hopefully nobody feels like they have to pull up the slack or give more than they're willing to give. I think when people are on the same page and they have the same goals I think that's when it works really well (A10). [emphasis added].

Notably, many of those focused on uniformity consider a pair is a group, the logic being that it is easier to find at least one other person with similar goals, motivations, strategies, and/or time commitments. This preference for working in pairs is considered a 'non-critical' difference within uniformity because of the in-built assumption that two people who seek each other out are likely to have something in common on which to build. For example, one student suggests that similarities only need to be a physical location, such as living arrangements, which facilitates getting together and therefore building a relationship on which other specific connections might develop or be discovered.

> I chose someone who was also living at [student accommodation]. So it was really easy to get together and work on things and I think we, yeah, like we went really well (A5).

> Like I always pride myself on working hard and if someone doesn't want to work as hard as what I do, then I find that frustrating because I don't understand why they don't want to work hard (A5).

Interestingly, students exhibiting a preference for uniformity also expressed a strong perception that (unlike university), teamwork or group work in the workplace environment was based on inherent homogenous co-workers, and shared expectations, goals and motives.

> If you let people work in groups of people they know at a similar level, that's probably more like a work place environment anyway (A2).

> At work it's a lot easier to work together because usually you've both got the same goals and … at the end of the day they've got someone to answer to if they're not doing that well. At uni you can get 51%, 52% and you won't have to be reviewed, you won't have the university reviewed, you won't have your scholarship reviewed, you won't have youth allowance reviewed, it's fine. You can just cruise through (A5).

> I think the difference between work and uni is like, when you're at work everyone's working for a common goal… whereas at uni, everyone's there for different reasons (A11).

9.1.2 Open approaches

Open approaches to group work, as expressed by students in case study one, included respect, friendship, growth and opportunity. In order, these represent the continuance of the hierarchical relationship depicted in Figure 9.1. The open domain is characterised by a willingness to cooperate and work together to achieve positive interactions. The following sections provide an introduction to each of these open categories and extracted exemplars from the student interviews.

9.1.2.1 Respect

Respect covers a myriad of situations and for many students respect is the foundation of a positive group work experience. In this structural hierarchy, it forms the first distinct category for those with a more open approach to group work. Respect and understanding underpin the categories described here as 'open', and suggest that first and foremost to have an open, interactive and cooperative relationship, you need respect. The critical difference that sets this category apart from the others is that a healthy respect for people

and for the task at hand can exist (and indeed the perception is that it needs to exist) with or without a desire to build or develop that further into friendship, reciprocal sharing, opportunities, and/or an interdependent relationship within groups. This category labelled 'respect' encompasses a diverse range of behavioural attributes such as manners; listening skills; courtesy, particularly through the communication of one's whereabouts, progress and/or personal situation that has consequences for the group; consideration of others; communication in general; a willingness to contribute; responsibility; punctuality; time management; and honesty.

> Well I expect them to actively contribute and I expect them to treat you know, each other with respect and just basic manners and courtesy and I think the way I think I interpret that the most is just through communication with keeping up with emails or however you've decided to communicate so everyone sort of is up to date with where you're at and what you're doing and yeah, not to leave a week go by where you don't contact or see the other group members and so they don't know if you're on top of things or if you're getting behind or whatever… I think just the importance of communicating and also trying to be more understanding of people because you never know what somebody else is going through as well (A10).

> You have to have responsibility for your task, for your group, for other people. I think that's the key thing…'Cause if you don't, it's also like not showing respect for other members (A9).

> You have to be able to listen. You have one mouth and two ears and you should use them in those proportions. Yeah, I think listening is really good and I think it's important that you have that open mind that you, even if someone says something that you don't necessarily agree with that, you still take it on board and understand that that's their view cause you're not always right (A12).

9.1.2.2 Friendship (caring and sharing)

This category is characterised by students with a genuine desire to be inclusive and build relationships as friends. It is the 'feel good' category that evokes a pastoral care component, to care, to support, and to value others. Notably it is not about being exclusive in established friendship groups but rather using the group work experience to extend the hand of friendship to others. For example:

> I know a lot of my friends did it on their own so I thought that was weird… But I felt that I wanted to help people out too, that's why I picked him up. I didn't want anyone to be left out… I don't mind if you don't have anything to contribute as long as you're there and you want to do what you could. I think that's the best thing and if people aren't motivated, if they don't have the spirit, don't really care, that's just the worst I think (A1).

> You have to be able to talk and develop a friendship first and then do the work…It's how relaxed we are…just openly chat about something…So you're not

> actually having a chat about it if you're just… 'I've got the answer to this, and they've got the answer to this,' and so it's not actually a discussion, it's just one person's knowledge and then the other person's knowledge and it's all going together. But if there's an underlying friendship there then, and they don't have to be friends straight away, but if you can develop some kind of friendship there then I think that's good (A5).

The nurturing nature of this category is reciprocal. Students also expressed their appreciation for being on the receiving end of kindness, consideration, sharing, and understanding within their groups.

> I think having someone who's there who pushes you but in a kind of nurturing way gives you the confidence to do something that you might not necessarily do (A12).

> If I work in a group with some Australians or people from different countries and they are trying to start a new topic, not relevant to the study or they just start a new topic letting people getting know better each other. That's a good way, they talk something interesting. Recently some people just, include me, I'm not get used to new [system]… We just talk about that and people get know better each other …It helps me to practise English… For myself I think, I hope, I can speak English better so it's easier for me to communicate with other team members. And sometime they can accept me, my opinions and things like that. I would rather share opinion with other people than just stay in the library doing work myself (A9).

9.1.2.3 Growth and opportunity

Another way of experiencing group work is through the lens of 'growth and opportunity', where the process of group work itself is the desired learning outcome. Group work is described as a 'style of learning' rather than a tool for completing a project. Although similar to the previous 'friendship' approach, particularly with regard to meeting new people as a key component of group work, the category of 'growth and opportunity' is more formalised and focused on engagement and learning and the importance of key individuals, such as tutors or group leaders, to foster the growth and self-development of students through new experiences and integrations. A reflective attitude to group work processes and lessons learnt about personal interactions is also an important distinguishing element to this category.

> Group work really allows you to connect with other people outside of your normal social bubble…to reinforce learning, allow social interaction and really break down barriers associated with ethnic diversity…To have that environment where I can hear other people's opinions and give them back but also get a good understanding of the material from the inside out, the outside in, but also within it, being able to really engage with the material and the people around me within that process, I think that works best for my style of learning and my goals…I love being engaged with people and engaged with process (A4).

> I'm so happy that I've had good experiences and bad experiences because I've gained an understanding, and I've got a lot yet to learn, but I've gained a certain understanding of you know, what's worked for me and the people around me and what hasn't worked for me and the people around me (A4).

9.2 The group work double-edged sword: Case study 2

The initial analysis of case study two student interviews (at Uni B) uncovered what appears to be a symmetrical bilinear hierarchy, described aptly by one student as 'a double-edged sword'. The double-edged sword analogy relates to students' conceptions that there are advantages and disadvantages to group work; further, it is possible to experience the positive and negative effects simultaneously, as described here:

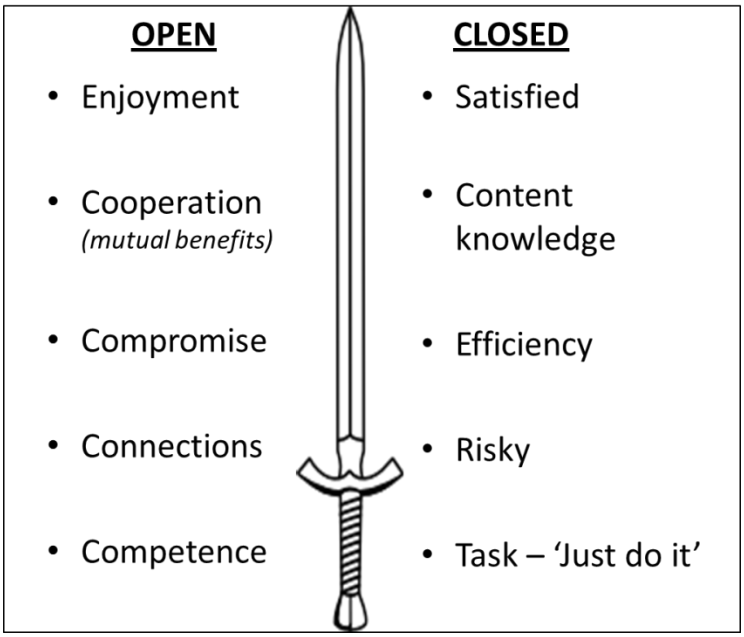
> It's good because you just learn so much about them [international students] and their culture but if that's not what the assignment's about, it doesn't really help (B8).

Labelled the 'Group work double-edged sword at CS2', Figure 9.2 provides a graphical depiction of the five pairs of elements plotted in order from a competency approach focused on meeting basic needs and the capacity to simply complete the task, to the higher level of enjoyment and satisfaction. Notably these categories for case study 2 students were derived independently of case study 1 and although they share the dichotomous split between open and closed approaches to group work in their accounting studies, further parallels between each of the case study sites will be explored later in this chapter. This section will now examine each of the categories identified in Figure 9.2 and highlight their respective characteristics and pairings by reference to specific extracts from the transcribed interviews from Uni B accounting students.

9.2.1 Competence – task approach

The first pairing named the 'competence-task' approach comprises students whose conception of group work is driven by the fundamental needs of the individual. At first glance it would seem that having personal competencies at the base of the open-minded side of the 'sword' is an oxymoron, given that the focus of individuals in this category is rather individualistic. However, for those in the competence category, despite the desire to be open and interactive, group work is hard, particularly where they lack proficiency. It's hard to discuss, it's hard to listen, it's hard to express an opinion and to

Figure 9.2 The group work double-edged sword at CS2



> It's sort of like a two-edged sword. A part of me thinks, 'Oh, no.' Then another part of me thinks, 'Oh, good' (B2).

get others to listen to you, it's hard when they do not understand you, and it's hard when you do not understand them. It's hard to write, it's hard to research, it's hard to find people to work with. These students identify strongly with their personal limitations but openly express the desire to overcome challenges, to become competent and participate more fully with their peers and group members. For this case study group, the fundamental personal need for language competence underpins this category, along with the need for respect; to feel wanted; and valued; to feel part of a team; and to be able to share ideas. The following extracts demonstrate one student's experience:

> Actually my group experience is not really good. The group members, they're not so nice to me… When we work together she didn't even look at my work. [She] just say, 'Go to learning support to have a look'…'Just find some local people to have a look to fix it'… 'How's your friend's English?' I'm just shocked -- I'm Asian so I've got English barrier. I was just so angry about that. I tried my best to do the group work but how could they just -- I know look -- yeah, many Asian people their English, they write English is not that good but I will try my best if you say, 'Oh this part, you have to rewrite.' I will rewrite it but you can't just treat me unfair, right? …Actually, I always try my best (B7).

> Some people don't want to listen. It's so hard to listen… They have to listen, right? [so] before that I will do some work -- before I come to a meeting. I have to get something to say. If it's my mother language, maybe something is common sense.

> But for me, I have to do some work, do some research just to get preparation… I don't expect them to prepare…For me, I will prepare but at least they can -- they have to listen to me. They have to listen to my ideas not just playing their iPhone or -- just as example…. I hope I can get some response (B7).

Others have a more positive experience of group work but still focus on individual competency in completing a task as part of a group rather than individually.

While the 'open' competency group concentrates on their personal needs and actively pursues what they must do to be able to participate in group work activities more effectively, the closed approach is focused on just completing the task with little or no interaction, and a passive indifference to group work generally. Interestingly, these task focused students still have fundamental needs and a preference for security, structure, and familiarity within group work.

> I probably work better by myself but I don't mind working in a group, it sort of takes a bit of the pressure off if there's more than one of you doing it, so it's not so -- you're not the only one, it's not all on your shoulders (B9)

9.2.2 Making connections to socialise or to mitigate risk?

The second pairing in this group focuses strongly on the human aspect of working together. The open, positive approach highlights the importance of making connections and building relationships in order to develop the social capital that will ultimately facilitate group work. With a closed approach, the task of group work is considered risky, and therefore it is important to get to know people so you make the 'right choice' to get the best outcome. This category, however, is not oblivious to incompatibility or irreconcilable differences; rather it is focused on making connections for those falling in the middle of what might be described as the relationship continuum. As one student explains:

> There are people that you instantly meet that you get on well with. There are other people that you know you'll never going to work well with. Then, there are people in the middle that you need to learn more about and they need to learn more about you. Then to find that common ground or some common interest, and so on, yes, you will work together, because no one is ever going to be the same (B2).

The open-minded approach embraces diversity as the foundation of learning together; diversity in all its forms: different experiences, backgrounds, cultures, perceptions, expectations, and personalities. It posits that acceptance is the key that

unlocks the potential and opportunities for making those vital connections and building relationships.

> It's just learning to accept and get on with different people who come from different backgrounds as well as different cultures …You're learning about the people within the dynamics in the group…It's that learning about getting on with other people first of all (B2).

> I enjoyed being able to interact with somebody that's had a completely different life experience on me (B6).

> I think having an understanding of all your group members helps…you really want to understand where they're coming from and why they're approaching it in a way or understand why that's their thought on this. And if you can understand that, you might start to question your own understanding and then you could build something pretty good (B8).

As mentioned earlier, this category is primarily about making connections, where getting to know each other is the most important priority for establishing a working relationship. For those open to diversity, this approach can yield positive outcomes on a personal level as well as work/task based. For others it is a 'double-edged' sword because making connections is seen as comprising two levels: socialising (on one hand) and completing a task or performance (on the other). In order to ensure positive outcomes in relation to the task, the objective must be to seek out like-minded people, those with similar skills, goals, aspirations, and work ethic, as well as personality.

> I like to work with people that I know and can connect with, on other levels than just doing the academic stuff. If you don't connect or click with the person, you're really not going to work well with them, and you're not going to give your best and they're not either (B2).

> It's always a bit of a risk…I think if everyone is sort of on the same page, everyone is aiming for the same thing and willing to do work, then it can work. And if we're all sort of like – [have] good communication and just honest about how they're doing with it. It really comes down to being in the same frame of mind. (B10).

9.2.3 Compromise and efficiency

Given the inclusive hierarchical nature of the case study 2 model (albeit bilinear), the third pairing of elements builds on the social aspect of getting to know people and making connections, to focusing on what that means in terms of completing group work tasks.

> We start doing the group project. But one of our girls, she's really sad with it because she had no idea with it [and then] she can't do that well because personal problem…So we have to do more work. So we just -- I say, 'Okay, no problem…don't worry.' She feels so sorry for that because it's very urgent we need

> to do all her work but yeah. 'Don't worry, it's okay. It's going to be fine. You're going to be fine.' Okay, no problem because everyone has their trouble, you need to understand… don't make it any trouble… she's already sad…We've already done this, so be nice right? So I think that's a good thing. Girls are really good for that… I think if one day someone did that for me, I feel so appreciative of you (B3).

> Like what I said before you have to understand others, you have to consider others thoughts, so you can't be dominant and you can't be thinking that I'm right... some people say they are more demanding, they are asking for more, but I just want you to understand that some of the person they don't aim that high, you have to understand that (B1).

Nevertheless, from a more closed perspective, the motivation for compromising is efficiency. For these students 'less is more' in terms of the number of people within a group. Group work is considered to be less efficient because the more you get to know people, the closer the relationship, the less productive the group. The drop in productivity is seen to be directly influenced by tendencies to deviate from the task at hand with irrelevant conversations and/or where too much time is wasted trying to negotiate different opinions.

> You have to a group meeting and you have to know okay, so what are their characteristics, what are they're aiming for and you just adjust your standard… So if you come across a problem with free riders then this is the reason why I will lower my standard, it's like you get the work done, you hand it in, you know that way I am happy. I am happy with 50% work instead of 0% work. But of course this depends on people. If everyone is like 100% devoted, everyone gets 100% work [done] then yes, I'll be more demanding (B1).

9.2.4 Cooperation/content knowledge

In terms of the 'cooperation' category, it is evident that the sharing of 'goals' relates more to a shared 'strategy' to achieve personal goals. In other words students are keen to work together and cooperate with their peers in order to advance their own position, while acknowledging that the actions and/or process of helping others is in fact helping themselves.

> I'm comfortable with the accounting ones but then with public speaking, we're always presenting and that's always not my strong suit… I definitely wasn't the leader then. I let the more experienced people do that (B5).

Similar to other open categories in this case study's model of group work approaches, diversity is also welcomed as part of the overall strategy of cooperation, but with caveats. In order to cooperate effectively you need to have the 'right' people and when you find the 'right' combination you stick together, although one non-critical

variation within this cooperation category is that while some students stick with a 'proven formula', that is group members they know, trust and rely on, others prefer to change the combination to suit the task. Either way, to achieve the goal of personal advancement through cooperation, the structure of the group, with the correct make-up, the appropriate mix of people, talents, and skills, is vital.

> We always stick together on purpose. So we are always in the same group, we've probably been in about five groups together. So it's usually easy. We just stick together and find another one or two people and we try to like suss out, who would be smart and kind of good at it… we just judge who asks questions in class, who always comes to class, if they never come to class then we don't want to be in a group and yeah you can kind of just tell with some people (B10).

> I normally tend to scope out people who show the same amount of interest that I do in subjects or if I already know the people in the class, I'll think about what they like, what they are like as group members. I always try to find the best group members for the current task. It's not always going to be the same ones because everyone doesn't go as well in each area, so yeah, I try to scope the whole class and see who's good and then I'll just go ahead and ask… if there's a lazy person, I'd get really stressed really easily, so– yeah… It varies. Some of them [groups] will tend to sort of mesh together, some you need different types of people… it's like different ideas. You don't want everyone with the same idea…It gives you a wider scope of what is actually asked instead of like knowing the answer so you get an alternative or like against the grain sort of answers and it sort of changes you, if you're bit always thinking on the straight and narrow (B5).

The closed approach to cooperation is also focused on having the 'right' people in a group, but the objective or shared 'goal' is strongly skewed towards simply obtaining content knowledge or grade goals, rather than being open to gaining other skills and benefits from interaction with peers.

> In my accounting subjects, I think it's really relying on somebody else to have just as good a knowledge as you do and being able to kind of confer ideas and standards off each other (B6).

> The point of group work is that you do a project together and everybody shares the grade… [so] each person has to care about their grade and have the willingness to contribute…I try to stay away from people if all they're trying to do is pass and you're trying to get a higher distinction. You've kind of got a conflict going on there between the amount of work you want to put in…I think when you are with somebody who doesn't care as much about their grade that you end up doing more, you end up learning more about the material [but] I mean it's definitely harder (B6).

9.2.5 Enjoyment/Satisfaction

The final set of paired elements sitting at the top of the bilineal 'double-edged sword' model of group work perceptions for students at Uni B, relates to the experience of

enjoyment and satisfaction. Overall, students on both sides of the spectrum at this university, those with self-centred closed approaches and those with a greater openness to group work opportunities, expressed feelings of contentment, friendship, happiness, well-being and overall satisfaction. Noticeably those in the enjoyment category not only enjoy group work, but exude an authentic positive attitude about their whole university experience; life generally should be enjoyed. In addition these students are empathetic and express a sincere desire to meet people; they have a willingness to interact, to share with others, and speak of a genuine love of learning.

> It's like -- I want to enjoy the process [and] I enjoy the learning side of things in terms of expanding your mind…One of the things I have learnt from the kids here is that they do enjoy themselves as well…I learnt, they've taught me that life should be enjoyed as well -- that made me realise probably more so that it is short, and you might as well be doing something you enjoy and with the people that you enjoy (B2).

> I have a project with my group members, and they're all my friends, so that's really nice. We kind of work together and then chat sometimes during the meeting and that's really good. It's not like we have to concentrate on work, one or two hours without any chat is so boring…I really like studying with my friends… without being stressful. It's really happy (B7).

The enjoyment of learning, and learning within the group work environment, for these students is also clearly underpinned by a very strong on-campus university culture centred on social interaction, friendship and communities of practice. Students often referred to other institutional characteristics such as size and campus activities as motivational factors as well. For example:

> I feel like [this uni] has a really good, like social network, everyone lives around here and everyone is friends. Yeah I really like it (B10).

> I feel so great here because I have friends and honestly, English is not that big problem for me currently. So I want to stay here longer… at our university, you can feel they're very polite to you and everything likes -- in China, it is impossible. You just walk down the street and meet a stranger and someone passed by you and say hello to you, that's impossible (B3).

The more closed approach in this category is labelled as 'satisfied'. These students are generally happy with the end result but the focus is squarely fixed on the satisfactory completion of the task rather than the enjoyment of social interactions, personal relationships, and the broader learning experience. Notably the 'closed' experiences, described throughout this section (9.2) have all similarly focused more on the task and/or knowledge acquisition. Significantly, what is considered satisfactory for one student may

differ for others, and this category does not differentiate on any academic measure of success, only on the students' perceptions and their expression of being satisfied with their group work experiences. Some describe their satisfaction in terms of conflict avoidance and acceptance based on consensus or their preference for a structured task and definitive directions. For example:

> Yeah, I'm always happy with the end result. I tend to get better marks when I do something by myself…and I make sure what I'm handing in I'm happy with. Whereas handing a final or a group one is sort of just -- everyone happy? Yeah, alright, and we'll just put it in. Everyone is happy because it's finished, I think (B8).

9.3 Group work and achievement: Case study 3

Case study three (CS3) examines the perceptions of group work experiences for a sample of third year accounting students at Uni C. The overarching theme that most vividly describes the focus of the CS3 students is achievement. Their perception of group work was strongly fixated on performance and the concept of group work as a 'knowledge' vehicle or tool to help improve their understanding, language skills, and learning of the content as well as their overall achievement in their degree. Figure 9.3 presents the structural model of the respective categories that have evolved from the interview transcripts of this group. Using an achievement goal framework developed in the educational psychology literature (Ames, 1984; Ames & Archer, 1988; Harackiewicz et al., 2008; Pintrich, 2000a), the model differentiates the categories based on performance and learning/mastery goal perspectives, as well as the familiar closed/open components: those with a closed-minded approach to group work and those predominantly open to developing interpersonal relationships and interacting with a sense of shared goals and cooperation. This model therefore forms more of a matrix with the directional arrows indicating an inclusive hierarchy, as described in the previous two case study models.

Similar to the previous two case studies, categories have been arranged in order, starting with the individualistic approach and moving through to cooperation. However, in this model the individualistic approach has been split into two. For those mostly focused on performance, where success and results dominated perceptions, group work experiences generally were considered not a good option for their personal goals. This group fell into the lower left quadrant of the matrix where they were closed-minded about their group work experiences at the same time as having a performance orientation.

Figure 9.3 An achievement goal orientation to group work at CS3

With a similar closed-minded approach to group work and a strong focus on personal improvement, the lower right quadrant includes the learning/mastery goal category for those who perceived group work as a vehicle for knowledge attainment. For this group, the individualistic conception of group work is that it is a valuable resource that underpins their personal learning and development of skills.

The open approach categories include commitment, respect, compromise and cooperation, in the top half of the matrix, and straddle both the performance and learning/mastery quadrants. Students in these categories not only work together and conceive of group work as a legitimate path for achievement, but also begin to converge to recognise a performance and learning orientation concurrently. Nevertheless, central to all categories in CS3 is the continuous achievement goal orientation.

9.3.1 Closed approaches in CS3

This section will further unpack the meaning of group work for CS3 students with a closed-minded approach to group work, beginning with the first 'closed' category labelled 'individualism', followed by the knowledge and control categories.

9.3.1.1 Individualism

The individualism category for CS3 has two distinct streams. The performance focused stream describes students who are organised, determined, 'driven' by results, and have high expectations of themselves. Their personal goals take precedence over any shared or group goals and they fear group work because of the perception that it will adversely impact their performance goals. Interestingly, however, there is also a self-preservation aspect to the individualistic approach. There is a cost/benefit analysis to determine how far one should pursue personal viewpoints and opinions in the group situation, if the desired performance outcomes are not met.

> Initially, it didn't worry me because I do work really hard at uni, and it didn't, but it got very exhausting because I was putting a lot of work into our analysis and decisions and they just weren't getting listening to. When we were doing really badly round after round after round it just got very draining and then I actually started to step back and I thought, "Why am I doing all this work and getting so worked up about the bad decisions that we're making and then they are not listening to me?" So, I really started to back off (C4).

The opposing individualism stream focuses on the benefits group work brings in aiding a personal learning/mastery goal. For these students, group work is seen as vitally important for practising and developing skills. It helps to improve language skills: speaking, listening, discussing; understanding instructions and content; and generally getting help to not only achieve a learning goal but to survive the academic milieu. The differences between the performance and learning/mastery approaches are non-critical variations because each shares a strong preference for what is best for them personally. For example:

> I try to [talk with] young people they don't' have much time to talk with international people. Like maybe they don't understand better, but then I don't understand what is happening. And I had to try my best to improve my English and that I wanted to be in the group work, get your friend… I think it's good for me like to work with them and this is really the good chance for me (C1).

9.3.1.2 Knowledge vehicle

The theme of content or knowledge acquisition continues and is expanded upon in the second category in the closed – learning/mastery quadrant. This category differs from the first because here group work is being perceived as the 'knowledge vehicle'. It is a tool or method for learning the course content. It provides the opportunity to learn from others. Significantly, there is a strong emphasis on knowledge as a commodity. It can be

measured, has value, and needs to be shared with those less knowledgeable. Knowledge is valuable because it underpins your status in life. More importantly there is a sense of a moral obligation to share your knowledge and skills and to help develop and build the knowledge and skills of others. For this group, there is also an expectation that the purpose of group work is to share knowledge and provide a platform or repository for getting help and understanding more about the unit content.

> For accounting, working in a group has widened my accounting knowledge (C2).

> I'm really happy working with the group. We can share knowledge. It's really important to share knowledge. Also we can learn a lot from them as well not only from the book… Sometimes we are not perfect. We don't know about something. Maybe someone is more knowledgeable than us. So it's good. Because every time we have group presentation or whatever, it adds up to our knowledge that we miss. Yeah, it's good…We are learning. We share knowledge and then no one can say, "No, you can't really pass" (C5).

> I think it's a really, really good method of studying, especially we do a group assignment or whatever like in class presentations. But even [if] it's not like that, we have groups for -- I mean study groups at the end of the semester to get through the exams and stuff and I really enjoy it. I think we can get more knowledge from the other students and we can be helpful to them. So yeah, I think it's a good method (C3).

9.3.1.3 Control

The sharing of knowledge in the group context is seen differently by students who are performance driven. They work hard in every unit and want to do well in every assignment. They have high performance expectations, are passionate, determined and disciplined, and generally fear failure. The 'control' category student is somewhat tolerant but generally feels isolated, frustrated and disadvantaged by having their performance impacted by factors beyond their control, both within specific units and more broadly as a consequence of university policies.

> The most difficult part for me was for them to understand how important group work is. They were a lot younger than me and it's just -- it just seemed that they just didn't care. And obviously, I took on the mother role from the start, because they could see that I was driven and I wanted to do well in the unit and that I was organising the meetings, I was constantly texting, emailing. That was a mistake on my part from the beginning because they just, "Oh, cool. Everything is going to get done for us." And it was very exhausting (C4).

To try and make the best of the situation, the 'control' group tend to be autocratic and need to organise and direct the group work environment. Control begins with being proactive, reading the unit outline before classes begin, knowing what needs to be done

and planning for the best outcome. Not surprisingly, this leads to a strong preference for choosing your own group members or at least being part of a group of 'like-minded' peers. It also extends to group work processes, ensuring that their personal aims are made clear and the process is driven by them in their preferred direction. One student describes success within the group work context as 'winning battles'.

> Initially, the team didn't really take to it. I think the blinkers were on and [they were] not thinking outside the square. I think they were dismissive at first and then…I converted them and that was a battle that I won, so after that my spreadsheet became a staple part of the decision making process. And through that, I was able to have a greater input into the decisions that we had made (C6).

> Everybody in that group I knew and I've done group work with them before and they're really good students and are really passionate like I am. So, we actually choose, we'd text each other and said, 'Make sure that you're in this class.' So, we had set our group up. So, that was really good. And then there was [another unit] we had to do a group assignment. That was really good because instantly, when I went into the tutorial, I had read the unit outline and I knew that there would be group work. So instantly, I come in and I assess the class and I definitely picked out who I wanted in the group. So, yeah, that has been really good too (C4).

However, those focused on performance and taking control to advance their own personal agenda, even with permission of other group members, face a number of issues, for example, alienating others in the group:

> I could be more tactful, more, I guess diplomatic but instead, I'm maybe a little too headstrong and that doesn't go well to open people to your -- to make them more receptive to your ideas (C6).

Simply gaining an overall group consensus is problematic too. Consensus is perceived as a compromise for some, and therefore a missed opportunity to produce something even better. Consensus can also breed a lack of accountability or motivation to perform. Strategies need to ensure everyone takes ownership. Individual accountability is widely regarded as one of the most important elements for cooperative and team-based learning (Johnson & Johnson, 2009; Michaelsen & Sweet, 2008; Slavin, 1996). As discussed earlier in Chapters 2 and 3, a common strategy to invoke that sense of accountability in group work is to use group contracts (Clinton & Smith, 2009). However, one of the limitations in a control environment, even with general agreement or a signed contract of agreement, is that these tactics are meaningless if the sense of responsibility is absent. The following extracts clearly demonstrate that where group members are content for those who want control to have it, it comes at a cost: i.e. no buy-in from the

remainder of the group and therefore the controller is left with the responsibility of driving the task goals alone.

> For the last unit, the worst experience, there was a contract. We had to draw up a contract which I ended up drawing up and everybody agreed on it, but yes, the thing got broken. We're all meant to do the contract together and I could see that it was never getting done and I thought somebody has to take this on. There are deadlines for these things. And our tutor, she was amazing. She was very strict, which I liked, and she was very regimental. I thought if I don't do this, this is not going to get done. So, it was everything that I wanted and it was just like, 'Cool, it's done. She's done it. Let's just sign it,' because some just tick in the box. If I said to them today, 'What was in the contract?' They would have no idea. So, it was my piece of work. It was a piece work for them to get over the line, to get to tick in the box and they really didn't care… Initially, it didn't worry me because I do work really hard at uni, but it got very exhausting because I was putting in a lot of the work… [and] they were not listening to me (C4).

> What happens in a group consensus is you get two, that sort of do everything but they can't go into a lot of depth and then they make all the decisions. And then after a week or two, the other members think, 'Well, if they're going to be happy to do all that, then I'm just happy to sit here and nod and that's a good idea'… So, I thought this contract would help affirm ownership, something that I brought over from the army in my experience. It makes someone accountable. It's amazing how much it can motivate them to perform. But again, I wasn't successful in that, but if you look at other battles that you win and like I won some – that made me feel good (C6).

9.3.2 Open approaches in CS3

As noted earlier, openness relates to a willingness to accept other opinions, perspectives, and ideas. For those focused strongly on their individual goal achievement, whether that is based on a performance or a learning/mastery perspective, the first step towards openness is to come together on the identified divide, performance versus learning/mastery. Therefore the first of two categories that have been designated as open for CS3 is 'commitment' and 'respect' which underpin the higher level categories, and ultimately cooperative learning. The second and highest level in the hierarchical model shown in Figure 9.3 is 'compromise' and 'cooperation'. Notably, the upper two quadrants in Figure 9.3 illustrate how the performance group and the learning/mastery group come together on the central y (vertical) axis of the matrix. The following extracts provide examples of how these categories are manifested.

9.3.2.1 Commitment

The interview data suggests that 'commitment' represents another related but critical variant in the conceptions of what group work means for the students at Uni C. It is important to recognise that commitment takes many forms and is perceived in a number

of different ways by students, for example: being prepared, attending face-to-face meetings, honesty, trying your best, being motivated, being responsible, self-motivation, and communication; and it appears that the focus can vary.

Arguably, commitment could relate to both open- and closed-minded approaches to group work, hence its borderline position in the centre of the matrix in Figure 9.3. For the students in CS3, the perception of commitment within groups is expressed from three main viewpoints: (1) external: what others need to do; (2) task based: what everyone needs to do to complete a group task; and (3) internal: their own personal commitment to learning needs. To fully appreciate the structure of the commitment category, the supporting evidence is best presented in a tabulated format, rather than the normal narrative form.

As shown in Table 9.1, extracts of the interview transcripts have been categorised by the type of commitment to which the interviewee referred and the perspective from which it was drawn. From each of these perspectives (internal, external and task-based), the group work focus is narrow and limits other standpoints or even explanations and expectations of behaviour for other group members. Notably, the type of commitment, such as having a commitment to communication, is relevant to each of the three perspectives. The difference is the perspective. Nevertheless, despite the short-term view to achieving specific goals that is common across the commitment examples, in combination, they portray the need to consider others in making a commitment to group work.

9.3.2.2 Respect

The concept of respect underpins the fifth conceptual category of meaning for CS3 students. In this instance, respect centres on the personal needs of students and specifically how group members are expected to behave to support performance and learning/mastery objectives.

Using an inclusive hierarchical model to describe the relationship between the respective categories, it is clear that respect is a necessary component to enable more open and accepting collaborative interactions amongst members of groups. Notably, for some students in CS3, the key to being able to successfully learn within the group work environment is to first gain the respect of their peers. The strong emphasis on learning and equality is evident. From a prescriptive viewpoint, some students argue that no person

Table 9.1 Exemplars of what group work commitment means for CS3 students

Perspective	Description	Type of Commitment	Exemplars from interview extracts.
(1) External	What others need to do.	Communication	Keeping lines of communication open is incredibly important especially when tensions starts to build because that's when communication will break down and what might be a simple issue could turn into something much larger and potentially, cripple a group and their ability to perform because of this indecision, they cut off the nose to spite the face - type of mentality(C6).
		Be inclusive	[When] they are communicating their own language in the group, it's not good. It makes you feel like kind of isolated and you don't know what's going on there (C3).
		Face-to-face meetings	When everyone contributes, when everyone puts the ideas together, when everyone is willing to meet in the library. I certainly have a lot of time. I can make time for it. I prefer to meet than just over an email because there's only so much you can put on email…Whereas, if you're right there face-to-face, it might be more of a hassle to get here but you end up doing a lot more work in a shorter period of time. Here I think laziness is a big issue (C6).
		Honesty/Integrity	Everyone should be committed to the thing that we have a group meeting, so no one starts texting and saying, "Oh, I am sick" or "I have to go to the hospital." So if you have committed to the time -- because I've been to many groups and then that's what they do. Five minutes before we meet, they say that, oh, I have to go to the hospital because my uncle is sick. That's a lie (C7).
(2) Task based	What all need to do to complete the task.	Be prepared	The most important thing is, you should study before you come to the group thing. Otherwise you can't explain anything (C3).
		Honesty/Integrity	I think you shouldn't hide anything. If you're not confident with the studies or the things that you have studied or something, if you're not getting into the unit, you should tell the others, so we can help them, or maybe we can go to the tutor…If we have waited to the last minute, everybody is going to be in trouble. I think honesty is the main thing (C3).
		Be serious	Everyone has to be serious about the subject so that no one slacks around and no one thinks, 'Oh, the other guys will do it and I'll get the grade' if everyone is serious it can be achievable (C7).
		Be responsible	We had a very good experience. We didn't even have a group contract but people in the group are really responsible and honest kind of students. Because of that, we did it really, really well. I don't think that they are the top students in the class. They're like really average students….[but] they took the responsibility for their parts. Because of that, we've got good marks (C3).
		Communication	In any world, even at home, without effective communication, you cannot achieve anything. So, effective communication in a group work is number one (C2).
		Punctuality	I think honesty and be punctual because if you're not punctual and you're just coming the to the group meeting late or just cancel the meeting and make excuses not to come, I think it's not really, really good because the other people dedicate their time and money and whatever to come to the meeting (C3).
(3) Internal	What I need to do.	Communication	Some time we just speak our language...it's easy for us to communicate. But actually we're not improve our English(C1).
		Be prepared	I have to prepare first my knowledge (C1).
		Try your best	If you cannot work, try your best to work. Maybe the other members will evaluate you;.that's why everyone had to try their best (C1).
		Self-motivation	I think self-motivation and discipline. Ethics as well -- so if you're success-driven eventually, you feel like you want to achieve something. Because I've noticed some students, they have fees here that have been paid by their parents. I've felt so many times, it doesn't matter. But for some of us, we're paying our own school fees and international fees, it's so expensive so you pay a lot of money and you're like self-motivated to achieve better, so not to lose whatever you have paid… You can study yourself, as I say, if you are self-motivated and you can study with the group even if you are self-motivated as long as you'll achieve the required goal (C2).

should consider they are better than any other. They should not think of themselves as smarter and they should understand the difficulties and limitations experienced by their fellow learners. The underpinning justification is that no-one is perfect. Further, the emotional and affective need for respect is also mentioned. It is suggested that when you are shown respect within the group you feel better and tend to be more relaxed in your interactions. As shown below in the evidence gathered from the student interviews at CS3, the emphasis is clearly on self-efficacy and the need for respect as a prerequisite to being able to learn, which is a key feature in this case study's goal achievement orientation.

> Learning from the group is… first thing is respect, having respect, okay. And then we are not dominated to, "I am smarter than you," no. Everyone share knowledge … Also, everyone, [should] not pick on the English, respect each other because we are learning, not saying I'm smarter than you, you must follow us, no, because we are learning. If I'm doing something mistake or -- yeah, it's really good. I mean, respect. That's really good, because I can feel that my team respects and then we support each other (C5).

> Also, when we had presentation, someone, all the student respects us and we are relaxed. We can present our presentation. If there's no respect, we can't achieve anything. It's all too hard (C5).

> We should respect the other's ideas. Because of that, we can have very good communication, whether you're not agreeing or -- so still, you have to respect the idea (C3).

9.3.2.3 Compromise

The 'compromise' category includes a number of different elements that can be considered non-critical variations. The variation in meanings range from a mutual understanding and appreciation of differences in skills and personalities to giving-in or succumbing to dominating personalities or simply tolerating poor behaviour and/or performance. Varying degrees of negotiation also play a part in the compromise category. Despite the differing levels of agreement, all types of compromise in this case study share a common thread in that they make concessions, and students in some way are 'open' to alter their aims/goals to more closely align with others.

In the following extracts, 'compromise' is characterised as being diplomatic and/or patient in dealing with others so as to find an acceptable resolution for both parties. Some expect that one will have to do more than others, depending on the task. Thirdly, one student explains that compromise means negotiating between equally valid options; and accepting the limitations of others; another element to the 'compromise' category is

to not make a fuss and simply cover for or pick up the load of 'loafers' or 'free riders' and to find ways to effectively work with different personalities to get the job done.

> [You need] to be patient, to realise that not everybody's the same as you and not everybody's going to put the same work. They don't have the work ethic. And probably to be diplomatic, you've got to be diplomatic. You can't go in with guns blazing and then going, 'You're not doing the work and I'm doing the work…' although I felt like a few times. So yeah, you just have to be patient (C4).

> I've worked with some groups that have had less rewarding experiences than others and that's to be expected because there are many different personalities. Sometimes, those personalities are at odds and two people that have an idea about how things could be done and those ideas could be right - although they're worlds apart. So, somehow a compromise has to be made and with varying success. Also, I think in a university like [this] that has a lot of foreign students as well, you must also take into account there is the language barrier which is understandable. University can be difficult on its own when English is your native language, let alone English as a second language (C6).

> When it comes to group work, like you will have different kind of personalities, you can see different kinds of people. But it's always important to know how to get the job done. So, it's not like complaining to each other. It's like getting the job done. It doesn't matter…Because the personality is different so you'll have to treat it that way, not the same way, so you have to be different and we treat them like that. Sometimes to get the job done, you have to pressure that person. Sometimes it does not work at all. By pressuring someone, some personalities can't get it. Sometimes like you have to be more friendly and get it done. There are different ways to get it done (C3).

The final example considers compromise to be about personal concessions, and takes something akin to a 'c'est la vie' attitude – 'that's life' – it will never be perfect so learn to live with it and learn from every experience. Thinking about group work experiences logically, this student uses quotes from Brooker T. Washington and Mark Twain to express his understanding of the need for compromise and how the obstacles one must overcome in group work form part of that more 'open' learning experience.

> It's good to get that experience because you'll never get the ideal situation. Sometimes, you just have to deal with what you have and make the most of it and what's that quote about success? …about how to gauge success? It's by the number of obstacles you've overcome, something to that effect (C6).

> *["I have learned that success is to be measured not so much by the position that one has reached in life as by the obstacles which he has overcome while trying to succeed." - Booker T. Washington (1901), Up From Slavery: An Autobiography]*

> …and I don't know, maybe it was Oscar Wilde that said I've never let my schooling interfere with my education (C6). *[A quote generally credited to Mark Twain]*.

9.3.2.4 Cooperation

The concept of cooperation sits at the top of the hierarchy in Figure 9.3. It embraces components of all the lower level categories in the CS3 matrix model and focuses strongly on the benefits of interacting, and working together to achieve joint shared goals of learning/mastery and performance.

The meaning of the 'cooperation' category for CS3 is most aptly described by one student who compares the advantages and rewards of group work to her experiences in her home country of Tanzania. The dynamics are similar when working together in an Australian university. Group work in accounting is seen to be more productive and providing more opportunities for learning. The rationalisation is built on a perception that everyone understands differently, so the more you interact, the more you learn and the wider and deeper your understanding. For that reason there is also a strong belief that tasks cannot simply be divided and completed by individuals – that is not group work. The following extract summarises the characteristics of the 'cooperation' category for CS3:

> I'll say the best experience is this semester, because most of the unit that I'm taking involves group work. And similar to what we were doing back home, we always work like in a group. And it's really productive if you work in a group compared if you study yourself because everyone understand the material different so you interact more and like your understanding become more wide and broad, but here I find people are so independent. When the class is finished, everyone grab their stuff and they go home. But working in a group itself has been a very good experience for me this semester and my team members, they're really good… Sharing some of the knowledge that I have that they are not sure, so we all contributed and discussed. So yeah, working in a group, I think you will achieve much better rather than working individually because -- and I've said before, we all understand different. Some of us may be understand by writing, some of us understand just by sitting and listening. So, we all shared and yeah, I appreciate my team well like this (C2).

9.4 Categories of description

Following the extensive preliminary analysis of student interviews at each of the individual case study sites, this section will now assemble the initial results, and in combination extract qualitatively different categories of descriptions for the sample group as a whole. It will begin with the process of amalgamating case study data. The final categories of description will subsequently be presented when the key similarities and differences across all three locations, including unique contextual features, will be clarified. The results will culminate in a structural hierarchy of the outcome space.

9.4.1 Combined preliminary categories

When combined, the initial list of categories, from each of the three case study sites, includes a total of 12 different ways of experiencing group work (as shown in Table 9.2).

Table 9.2 Combined preliminary categories of description

OPEN
• Growth & opportunity
• Friendship & making connections
• Cooperation
• Respect
• Compromise
CLOSED
• Self-oriented individualism
• Lack of competence
• Uniformity
• Competition
• Control
• Knowledge vehicle
• Efficiency *(means to an end)*

Five categories represent an open approach to group work while seven are identified as being more closed in their approaches. The initial dimension of variation, on which each case study category was grouped, was labelled open and closed. The open and closed groupings provided a common level of delineation across all categories and all case study sites. Further analysis of 'how' categories varied and the key dimensions of variation will be discussed in the following section.

The next step in extracting an overall set of categories to describe the different ways of experiencing group work for undergraduate accounting students, is to identify the similarities and differences in the categories across the three research sites and highlight important characteristics that will help classify the categories, or components thereof, as either referential or structural dimensions. In phenomenography it is not only the description of 'what' the phenomenon (group work) means for the interviewees (the referential meaning of the 'categories of description'), but also 'how' the categories vary (the structural aspect) (Bowden & Green, 2005; Marton, 1994; Marton & Booth, 1997; Marton & Pong, 2005). The key dimensions of variations make up the structural aspect and demonstrate the logical relationship *within* the categories (Marton & Pong, 2005, p. 336). Importantly each of the preliminary categories or 'conceptions' described in the previous sections comprise both referential and structural aspects. Marton and Pong (2005, p. 336) explain that 'these two aspects, though different, are intertwined in nature'.

Åkerlind (2005a, p. 70) describes them as 'dialectically intertwined'. Consequently, the next phase of this analysis focuses more specifically on both the meaning and structural components concurrently. Notably the emphasis here is on the critical aspects that form distinguishing features between categories. As pointed out by Åkerlind (2005a), phenomenography is not about trying to include everything but rather 'focus[ing] on critical aspects [that] allow structural relationships to be highlighted in a way that would not be possible if the analysis focused on every nuance of meaning' (p.250).

9.4.2 Combined categories of description

The analysis of the combined student interview data derived six categories of description, which represent the qualitatively different ways of experiencing group work in accounting education. Consistent with the preliminary analysis of the separate case studies, the final categories of description can be clearly divided into two components: closed and open approaches. The six categories that emerged within these respective components are:

Closed approaches:

A. Avoidance concept
B. Task efficiency concept
C. Content mastery concept

Open approaches:

D. Cooperation concept
E. Skills development concept
F. Relationship concept.

The categories (A - C) listed as 'closed' approaches to group work focus on self-oriented individualistic outcomes of group work; whereas Categories D - F represent an inherent openness to group work in accounting, and the promotion of interdependence between group members. Illustrations of the inclusive hierarchical nature of these categories will be presented in the following section, which will also identify the common themes evident throughout, and therefore the dimensions or structure on which the outcomes rely.

9.5 Themes of expanding awareness

A matrix of the outcome space for the combined categories of description for accounting students' experiences of group work is presented in Table 9.3. The horizontal axis of the matrix characterises the six categories of description (A-F) (the referential aspect of what is experienced), while the vertical axis lists the five themes of expanding awareness. These themes represent the structural aspect of group work experiences and focus on how the phenomenon of group work is perceived. Marton (1994) explains that awareness relates to certain aspects that are explicitly in the foreground of an experience. Other aspects of the phenomenon are implicit and sit in the background of one's awareness, although it is not a 'dichotomy between two classes of things or aspects but rather a more or less continuous variation' (p. 4427). Because some things are more relevant in any given situation, the aim in phenomenography is to identify the themes that are most common and map the different ways these are experienced in relation to the phenomenon of interest (Marton, 1994).

The common themes thematised in this study are:

1. Performance
2. Learning
3. Group processes
4. Time horizons
5. Feelings

Collectively, the student interviewees similarly focused on these areas when expressing the ways they have experienced group work in accounting. The categories of description highlight the qualitatively different ways each of the themes of expanding awareness were perceived.

9.6 The outcome space and key aspects of variation

The hierarchical relationship between the ranges of various meanings in the outcome space is described below. Examples extracted from the interview data illustrate how each of the categories of description vary on each of the common themes. These are summarised in Table 9.3.

Table 9.3 The outcome space for the combined categories of description for student experiences of group work in accounting education

	Categories of Description					
	Structural aspect			*Referential aspect*		
	Closed approaches (Individualistic)			Open approaches (Interdependence)		
Themes of expanding awareness	**A Avoidance concept**	**B Task efficiency concept**	**C Content mastery concept**	**D Cooperation concept**	**E Skills development concept**	**F Relationship concept**
1. Performance	Avoid relying on others for marks	Acceptance	Improves individual result	Compromise; shared task goals	Alignment to future work teams	Making good friends
2. Learning	Not conducive to learning	Means to an end; learning is secondary	Knowledge repository	Appreciation of diversity; mutual benefits; negotiation	Growth & opportunity by embracing diversity	Building relationships & understanding others
3. Group processes	Conflict is caused by diverse abilities & free-riders	Divide a task to share workload	Dependent to Competitive	Being responsible, considerate and accountable	Promotive interaction	Reciprocal caring and sharing; genuine inclusiveness
4. Time horizons	Lack of commitment; waste of time	Getting a task done in the shortest time with least amount of effort	Reliability saves time	Punctual; proper management of time & commitments	Time needed to appreciate and value different perspectives	Desire to spend time together
5. Feelings	Angry & frustrated	Annoyed to satisfied	Confidence	Respected	Enjoyment	Friendship; emotional & psychological well-being

Hierarchical relationship between the ranges of variation across categories

9.6.1 Category A: Avoidance

As noted previously, the closed-minded categories are characterised by students' focus on self in their own immediate environment, circumstances, and personal consequences and on the task at hand. The closed categories are listed in order starting with the avoidance concept, which as the name suggests, describes a preference for not participating in group work activities. Alternatively, if group work is compulsory, there is a strong aversion to being assigned to groups, rather than choosing your own group members. The avoidance notion is derived from negative experiences of having to rely on others for marks. Group work is seen as: not conducive to learning; constantly marred by conflict due to unscrupulous free-riders, and the lack of ability, commitment, and/or poor performance of other group members; overall a waste of time.

The avoidance concept is initially grounded on individual performance expectations with each of the themes of expanding awareness adding to a better understanding of the key aspects that are important for the individual. Students' expression of their overall feelings about the situation represent the culmination of how their awareness was expressed. For the avoidance concept the familiar sentiment was one of anger and frustration, because the situation is unfair. The following examples highlight the key themes for the concept of avoidance.

> I don't agree with your tutor putting you into groups because if you want to do really well in a unit and you're put into a bad group that can affect your overall result and I don't think that that's fair. If those people are not willing to put the same amount of work in as you, it reflects badly in your mark. I really don't think that that's fair. I think that you as a student should be given the right to choose who you want to be in your group…. I'm just so scared that the younger ones don't put the same work ethic in that I'm going to do (C4).

> From the beginning when I joined the group, my initial thought was, I want them to listen to my idea… they should listen to me… at the end they didn't and then I felt very frustrated…I don't think I learned anything. I think I'm wasting time…at the end of the day I need to pass the subject and I feel really confused… 'I don't want my future being influenced by you three just because of you not listening to me' (A7).

9.6.2 Category B: Task efficiency

The second category is task efficiency. From a 'closed' perspective, the focus of this group is to simply get the job done in the easiest and quickest way possible and with the least amount of fuss and time commitment. The mantra is straight forward and uncomplicated – group work is a means to an end. The critical difference between

Category A and Category B is the acceptance of group work as an efficient way to complete an assignment. Notably, a key aspect to the efficiency concept is not to actually work together but to simply divide the task and/or do the minimum work required.

> There's no point two of us or everyone of us in the group, look at one question, go back you know, do it at the same time, it's not efficient at all, it's wasting time (A3).

> For the group, I will have ten people to find out ten solutions and my initial thought will be that ten people separate those ten solutions, one for each one and then make the things easier. That is my initial thought. I don't think I compare with the result. I think for the result part it won't be much different (A7).

A non-critical difference within the efficiency concept is the preferred group size. Logically, it could be expected that more group members suggests less work per person as noted in the above quote, however for others with an 'efficiency' approach, too many people in a group can be inefficient. The goal is clearly to complete a task and anything that is considered irrelevant to that task or adds time or effort is considered burdensome. For this reason working with only one other person can be the preferred form of group work. The time horizon is an important theme for task efficiency. For example:

> The more people you get, the more unproductive it gets or there's just more chances to get off topic. I feel like it's just a lot slower process, the bigger the group is…If you've got two knowledgeable people, I think the group projects go a lot faster than doing individual work because you can sort of -- most of the time that person can either cover an area where you're not completely versed on. Or you can get together and work it out or figure it out without having to go back and look at textbooks and research and things like that. So I think in accounting, group work has really enhanced my ability to do a more quality project in the same amount of time or do with the same quality project in a shorter time (B6).

> I would prefer like two people because it's easier to communicate together and we need to do it together, it's easier to arrange appointments, meetings, things like that (A3).

> If you're with someone you don't know at all it makes it harder because you have to do all that human stuff as well… all that stuff then it can get in the way (A2).

Ultimately, an efficiency perspective is a considered cost/benefit analysis. The task goal is of primary importance, while learning is a non-essential secondary component. There is an opportunity cost. For example, the amount of effort required to secure a good mark in a group work assignment may be too great when evaluated against the need to complete other individual work at the same time. These students are often annoyed by the intricacies of working with others but in the end simply need to be

satisfied that they have made the most efficient use of their time and energy.

> Well, in my opinion as long as it gets done before the deadline I am satisfied… If you can't find the best solution at least you find a good solution (B1).

> I do enjoy working in a group when it's sort of structured like probably when there's a bit of support. Sometimes it can be a bit annoying when you're just sort of thrown together and no one really gives you any direction (B9).

> I do adjust my standard because sometimes it's hard for me to control the mark for group work (B1).

9.6.3 Category C: Content mastery

As shown in Table 9.3, the content mastery concept (Category C) is still individualistic and task focused, in the same way as other 'closed approaches' to group work. However, in line with the hierarchical framework exposed by the categories of description, this category is not only about efficiencies but more about the effectiveness of learning from each other and getting the best possible result through a confidence in the ability of other group members. Group members are perceived to be useful knowledge repositories. Although, again there are two streams within this category. For one group there is little tolerance for diversity or personal attributes that differ from their own. These students are committed to being the best they can be. They perceive themselves to be high achievers and competitive individuals, they need to align their goals, motivation, and skill levels, with others who have similar characteristics, in order to perform well and master course content.

> I try and choose people who want to reach the same level or put in the same amount of work that you do... I think it very much depends on who you end up with and if they've got a similar goal to you…yeah, I don't think the type [of group work] matters to me. It's more the people that are in your group that makes a difference I think (A10) [emphasis added].

> Team work I think it works really well when you're in a good group, like with friends and everyone's working together…like everyone has their strong points…We decided that we'd do the assignment separately and then put it together so that way we could compare and try and get the best answer possible (A11).

The identified issues that underpin a content mastery approach relate to personality, reliability, commitment, and ability. These are the same issues that drive the second group of students, those who struggle with learning difficulties, language barriers, and/or understanding a specific component of a course. For this group of students content mastery remains the critical focus, and improving individual performance is still foremost

in their awareness. However the level of ability differs. The knowledge exchange within the first group is content focused and reciprocal; whereas the second group tend to seek confidence from a dependence on other group members to teach them.

> Honestly, I don't have any idea about the theories and I don't know how to make that project if it's individual. I have totally no idea about that. I think, 'Oh God, I can't make this assignment by myself, if it's individual'. But in a group, it's really good (B3).

> Because my feeling, we are learning, okay. No need to be shy or embarrassed, like who are they -- if we are to talk nicely, politely, they will help (C5).
>
> You know some time when I studied, just only me -- like I get stuck. Yeah, it's hard for me to understand and give the solution by myself but if I work in the group - I mean I can get more idea, more answer and maybe I can open my knowledge because you know -- work in the group is actually a different level, different knowledge. Like some people maybe study better than me…[and]… some time when I sit in the lecture, there's something I'm not sure and I don't understand much. But with the group work maybe some time I don't understand I can listen to them to talk and maybe it's like simple or like the lecturer talk. We go with the friend very easily to open our mind and maybe talk, talk and then we can get like more knowledge and they can understand specific more than in the lecture … I feel like I get more confidence. Like when I work in the accounting group, like I get more confident then (C1).

> Two of them are native English speaker, so it's been a very good interaction. Whenever we do wrong, they corrected us (C2).

The differences in the conceptions of students with different abilities are not considered to be qualitatively different. Both focus on competency and mastery, however they are simply starting at a different base level. The nature of the help seeking is similarly motivated by a desire to improve self-performance.

9.6.4 Category D: Cooperation

In the hierarchical structure of the combined categories of description, the cooperation concept represents the first of three open approaches to group work. An open-minded approach to group work identifies any number of personal benefits that can be accomplished by working together, not only the successful completion of an assignment or set task, but also better recall in exams, reduced stress, being a better learner, developing the ability to adapt and adjust, or even learning a new language. It is that sense of mutual benefit that underpins cooperation, developing interpersonal skills, and improved relationships. For this reason, the open approaches to group work in Table 9.3 are identified with the theoretical concept of interdependence. The following exemplars explain how interdependence is intertwined in the key aspects of Category D.

> I like helping other people. It just makes it better for me and better for them… We always get to teach each other and that gives us the skills to be able to like, we get into the exam and we just remember those points and you just remember saying that and then it's a lot easier to write it down because you learn 30% better if you actually get to teach someone. So, if you speak it to someone, it's always going to have a greater effect on you… [and] if we don't understand something, we normally go to the teacher, but if someone else understands, we can teach each other. Having group work really makes a difference… I don't think I would have been able to go through uni without anyone else (B5).

Similarly, cooperation is described by another student as a symbiotic relationship because ultimately helping others in group work is self-serving because by helping others you are helping yourself. Cooperation is about achieving mutual goals.

> I don't mind helping when someone has made an effort. In this particular case, in my mind, no effort had been made -- a lot effort had been made to explain what it is we were trying to accomplish. So, that was very frustrating… Although, I think it [helping] is a bit more self-serving in that you want a better mark at the end of the day. Certainly, if helping somebody understand the concepts helps achieve your goal, then you have that symbiotic relationship there…it's just achieving mutual goals (C6).

In the cooperative learning literature, cooperation is defined as 'working together to accomplish shared goals' (Smith, 1996, p. 71). For this first level in the openness approaches, that broadly means goals that are mutually beneficial for completing the task at hand. In the themes of expanding awareness there is recognition that goals may need to be adjusted and a compromise negotiated in order to benefit from working together. Learning and group dynamics are supported by a more open-minded attitude, with students expressing their desire to consider others, to be honest with each other, to be empathetic, understanding, to compromise, and to ensure everyone is aware of the goals that are shared. Ultimately, cooperation is characterised by feelings of respect and acknowledging others. For example:

> I think you have to be fairly sort of open, open-minded, open to other people's way of thinking. You certainly have to try and find a compromise and a common ground (B2).

> [It's] how to communicate totally with each other, even [if] there is questions or a problem exists, we should communicate as this is very important to respect each other. So not just, I don't care [about] you (A8).

> What makes it work? - just for everybody to be on the same page and to make it clear from the start that we want to do well in this and let's set the conditions from the start and make everybody aware that this is how you feel about it. And get their feedback on it so that you're all in the same page (C4).

> Respect is really important, because with respect we don't feel like I'm smarter than you, otherwise we'll never learn… for me, I mean, as long as we can find any nice word to make anyone respect us, there's no need to worry (C5).

In addition, consideration of others also underpins the time horizon theme in Category D because cooperation requires commitment, being prepared, and employing appropriate time management to ensure others are not inconvenienced in the pursuit of the shared task goal. Table 9.1, presented in section 9.3.2.1, collates a number of exemplars to illustrate what group work commitment means from internal and external horizons as well as from a task perspective. In combination, these examples highlight the next step in the logical hierarchical relationship between the categories of description, and at the same time demonstrate the critical differences that exist between the concept of cooperation and other categories.

9.6.5 Category E: Skills development

In this category, the stigma of group work and group work assignments is criticised by students because they consider group work should not be simply about completing a joint task. It should be about interactions, communicative skills, being aware of the learning opportunities that exist in success and failure, breaking down barriers, and having a better understanding of cultural diversity (Volet & Ang, 2012). Significantly, the awareness of performance in this category is also embedded in an appreciation of the need for social skills and teamwork for future careers. Category E describes group work as the broader development of generic 'people skills'.

> So at the end of the day it's all about the people you're working with… we need to learn how to talk to different people, to work with different people. When they have different opinion with different people, what should I do… Each subject will require me to do group work which I will have 24 opportunities to learn how to talk to different people. I don't really think group work is something really easy to do because everyone focus on the task but they forgot the people … I will say that group work will help a person grow up, will let him know how to work with other people. That is something most important. It's not the task itself. It's the potential things (A7).

> I think like in the real life when I work for some company in the future maybe I have to also work in the group. That's why I think this is a good time for me to like, to get more experience and practice. I like this (C1).

For Category E respondents, the real issue is not the task, it is the people. Group work is about personalities and cultures and how well group members interact and work together. In addition, when true collaboration is experienced, students describe the joy of

learning and developing new skills. Therefore the requirements for full and effective group work in this category are being open and ready to learn different skills, being friendly, understanding, supportive, and sharing.

> That's the main thing I wanted to tell you, having group work, you learn how people work and then you can develop new skills in the group, I learned how the person works, how he thinks out everything. So, you learn a lot, you learn quite a bit and you meet different kinds of people. You see how they work. Some good ones, you can pick from them. Some bad points, you can learn that this – if they haven't done it – I shouldn't do it (C7).

From the perspective of skills development, being open suggests an unimpeded approach to group work, a willingness to interact freely with others, to cooperate, to communicate, to accept and embrace diversity, and to be flexible and adaptable in different situations, to grasp all opportunities for growth. It is about being amenable and responsive to the value all group members can offer, in other words, to engage in promotive interaction (Johnson & Johnson, 2013). In the themes of expanding awareness, the feelings most often associated with the development of these interpersonal skills is enjoyment.

> I kind of enjoy that camaraderie and getting to learn about other people…[and] just as an overall experience (B6).

> Yeah, well, I mean I enjoy it…. I think when you've got more people, more brains, more heads are better than one, kind of thing, I think it gets better… I really enjoy it…and I enjoy meeting people, and I enjoy just listening to people's stories where they're from, what they do…you just need to be open-minded and be happy… it's definitely strengthened my idea of that, you've just got to be willing to -- I mean I'm willing to try everything (B4).

9.6.6 Category F: Relationship

Closely aligned to developing people skills is the final category, the relationship concept. Having built a closer personal relationship through the growth and development that occurred in the previous category, Category F is conceptually different because it raises the bar in terms of intimacy, relationship, trust and the emotional commitment to caring for others on a personal level. The emphasis in Category D was the task goal, in Category E it was the development of interpersonal skills, whereas Category F recognises the close bonding and friendship that is evident in some students' experiences of group work in accounting.

This relationship category is strongly focused on the human aspect of group work and specifically on fun, enjoyment, making friends, harmony, and happiness, within the group and beyond. The meaning and purpose of group work in this category is to learn about building relationships – to make friends; to care and share; to learn from others; and to learn with others, because there is no better way. Notably the critical difference here is the importance of 'the person' before all else. In previous categories, friends were discussed in terms of their usefulness (or otherwise) in achieving efficiencies; having respect to complete a task, and showing courtesy towards others. This category differs in its attention to pastoral care, emotional and psychological well-being, and the development of social capital. The following extracts demonstrate how relationship is conceptualised in the context of group work. They highlight the inherent value of friendship and close personal relationships for psychological health, self-esteem, social competence and ultimately to social interdependence and the ability to successfully work together in groups (Johnson & Johnson, 2013).

> I loved the friendship…friends that you might never know before… I don't close myself up to just people I know…I like making friends and it's fun to work with someone else. And you know, more is better than one… I think you learn about people, that's really important, yeah. You learn about your friends that you just met and you actually learn a lot about the concept that you're learning too… I learn more about these people and people trying to work together and you might have like new friendships so that's fun too, that's good (A1).

> I've made friends this semester with my group, whereas, I didn't know them prior to this semester, so that's been good. And yeah, even though we only had to do a group presentation, we've sat the whole semester together and we've done all that work together and studied for the exam together and that's being really good (B8).

> So I'm pretty much never at home. I am always at uni if I'm not at work which is like it's good that I guess a lot of people are like that here as well, because I know my sister she goes to [another uni] and she is never at uni, like she just goes for classes, it's not like a social thing, it's not like where you'd spend the day. Whereas here, if I have the day off I'll usually just spend the whole day here, doing what I can, like seeing people, you always see people, you know, and so I guess for that it's, it doesn't seem as bad, having to come to uni and be in the library all day, because you know that that's going to be, heaps of friends there and everyone is doing it. So yeah I think that's a good thing (B10).

9.7 Chapter summary

This chapter employed a phenomenographical methodology to analyse and report on the meaning of group work for a sample of accounting students from three geographically diverse case study sites across Australia. It began with a preliminary analysis of each

research site separately, then subsequently combined the data set to extract six distinct categories of description, presented on a matrix across five themes of expanding awareness. The results showed that the categories of description could be further grouped into two key domains: closed individualistic approaches to group work; and open approaches which embraced an interdependence perspective. On each of the common themes of awareness, performance, learning, group processes, time horizons, and feelings, the six categories of group work experiences were able to be plotted in an inclusive hierarchy. The first three categories, the avoidance concept, task efficiency concept, and content mastery concept, highlighted the individualistic nature of some experiences of group work, while the foci of the later three categories, cooperation, skills development, and relationships (respectively), embraced the theoretical underpinnings of social interdependence and cooperativeness.

The final chapter in this thesis will follow with an overview and discussion of these results, together with a synthesis of the findings, reported in the previous three chapters, specifically in respect of the five research questions. It concludes with the implications of this study and the opportunities for further research.

Chapter 10: Discussion

> 'I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel' *Maya Angelou (2003, p.263).*

10.0 Introduction

A discussion of the key findings in this study is now presented. This chapter highlights the significance of the theoretical framework devised in Chapter 3, and emphasise how each component of the study integrates to present evidence in support of an overall theme of affective interdependence. For academic participants, their perceptions and experiences of group work are categorised into four domains, indicating positive and negative aspects identified for both students and staff. For students, the quantitative results uncover a five factor solution to describe group work, supported by six qualitatively different ways that students experience group work. The qualitative categories of description are further grouped into two key domains: closed individualistic approaches to group work, and open approaches which embrace an interdependence perspective. Overall, the findings suggest that in all variations there exists an overarching affective concept of connectedness and need for respect. Values and attitudes are considered key to facilitating collaborative learning in accounting. The implications of these findings are far-reaching for all stakeholders. The following sections will discuss, in turn, each of the five research questions examined in this study, evaluate the main implications of the results, and finally provide a diagrammatical representation of the combined findings from an integrated perspective.

10.1 The use of group work in accounting education

The ubiquitous use of group work in universities, as a method for imparting interpersonal skills and providing students with an opportunity to develop a range of associated teamwork and generic skills has become problematic. The issue in general is that teamwork skills are generally not taught and students are left to their own devices with little or no direction about how to engage fully and productively in a collaborative learning environment (Summers & Volet, 2010). The statistically significant findings in the current study support this assertion. Given the potential impact such circumstances might have for the accounting discipline, where teamwork skill development is mandated by the professional bodies, as well as the higher education sector, the first research

question sought to explore: *To what extent and in what ways is group work used in Australian university accounting schools?*

The extent to which group work is used was examined from three different perspectives: unit outlines, academics, and students. Firstly, a content analysis of 90 unit outlines, which represented all accounting units offered at eight Australian universities, was undertaken. The results showed 34 (38%) of the units examined were using assessed group work. Some referred to ad hoc non-assessed tutorial group work, but as the academic interviews later revealed, this is a technique that is universally used but not necessarily explicitly acknowledged. Therefore to maintain internal validity, only assessed group work activities were included in the unit outline analysis. A wide variation in the frequency of group work, from only one unit (8%) at Uni A to all units (100%) at Uni B included assessed group work activities. Likewise, the weighting of group work assessment as a percentage of the overall grade for any one unit varied greatly from 10% to 100% of the available marks in a unit, although the majority fluctuated between 10% and 35% of the overall grade. The ways in which group work was used in accounting classes however was restricted mainly to presentations, case studies, and technical assignments. Notably, specific details of assessment criteria were not provided in unit outlines, so it was not possible to evaluate what learning outcomes were being assessed. However, only three of the 34 units using group work (9%) explicitly stated that teamwork skills were a desired unit learning outcome; half made general reference to institutional graduate attributes that included teamwork, but the remaining 50% did not refer to the development or attainment of interpersonal or teamwork skills at all. This implies that group work is generally not intended to achieve teamwork learning outcomes. Notably, with the inception of national regulatory standards taking effect from 1 January 2017, it would be expected that these statistics should improve, however it does indicate that there is potentially much work to be done to ensure a more targeted and explicit determination by unit and/or course coordinators to address the interpersonal, teamwork, and people skills criteria.

Analysing the unit outlines at eight accounting schools suggested some commonality within schools, but a wide variation across schools. Further analysis of unit outlines over time (2009-2013) suggested that the extent and use of group work in accounting was likely related more to the personal choice of individual academics, except at one institution where group work was prescribed for particular units as part of an

overall faculty strategic plan. This conclusion was verified during interviews with 23 accounting academics from six of the original eight universities.

From the academics' perspective, the extent to which group work was used was significantly higher for those without a teaching qualification compared to staff with a formal teaching qualification. This result may reflect why the majority of the academic respondents do not teach teamwork skills (74%), nor do those with coordination responsibilities provide training or specific team-based resources for other teaching staff in their units (81%). This sample is too small to suggest causality, however it is reasonable to expect that those without teaching qualifications may potentially lack the knowledge and skills to provide the necessary teaching and/or training in group work pedagogies. It could also be argued that those with a teaching qualification background understand the pedagogical complexities of teaching teamwork skills and formulating rigorous group work assignments, and therefore actively choose not to undertake such a labour intensive and time consuming task (Baird & Munir, 2015). Unfortunately, Sin and McGuigan (2013) found that accounting academics generally, are captured by institutional policies and reward structures based on traditional research targets, and therefore expend minimal time and effort on teaching and learning activities. This suggests that academics with teaching qualifications, who potentially have the ability to improve group work outcomes, do not have the incentive to do so, and those without teaching qualifications who are prepared to use group work activities, lack the incentive to develop their skills in this area. Clearly, further research with greater sample sizes is needed to pursue these propositions, however the findings are significant for this group of academics and begin to uncover important issues relating to the skills and abilities of the educators to address the identified gaps in teaching generic skills such as teamwork and group work skills.

Interestingly, willingness and confidence to teach teamwork skills were not significant motivators for academics using group work, although when tested for demographic differences, female academics were more likely influenced by their willingness to teach teamwork skills. Conversely, male academics focused more on managing workloads, which is consistent with the findings in de la Harpe et al. (2009), and supported by the work of Hancock, Marriott and Duff (2017). These findings allude to a minimalist approach to teaching and learning, specifically in relation to group work, that is alive and well in the accounting discipline.

In combination, the only significant influence for accounting academics to use group work was their willingness to assess it. This result supports the earlier finding that teamwork skills are not taught, and despite the rhetoric, the main focus in using group work in accounting units is assessing the final product for technical proficiency. It further highlights the urgent need for theory and practice to be better integrated within accounting education, particularly with regard to group work, social learning theories, and most importantly the regulatory and professional mandates requiring that accounting students are suitably equipped with essential people skills and teamwork learning outcomes when they graduate.

Students provide the third and final perspective on the extent to which group work is used in accounting courses. Overall, students' perceptions of group work in the context of accounting, complements the perspectives of academics and the information provided in unit outlines, except that students indicate that group work is used often in accounting, and is considered to be more prevalent than in other business disciplines. The analysis of the unit outlines suggests otherwise, although it is conceivable that students' perceptions may be framed by the relative importance of their experiences, as will be discussed later in this chapter (Stalans, 2012). In addition, due to the sequential design of this study, and the size of the project, the collection and analysis of unit outlines and subsequent survey and interviews with academics and students, did not occur in the same academic year. In this case, the aim of analysing different viewpoints is to provide complementary information, and not the triangulation of data.

Nevertheless, in line with the findings from academics, the majority of the student respondents (62%) perceived group work was important to their future careers, although only 45% believed group work should be used in accounting units at university. This apparent divergence may be explained by the fact that most students perceive that group work skills are not taught in accounting, nor is group work monitored by their accounting teachers, a perception that is verified by the academics themselves, and is discussed in detail in the following section.

10.2 Discussion of academics' perceptions and experiences of group work

In relation to the context of group work at university, the teachers' role and their perceptions and approaches to group work is an important variable to consider. Prior research has found that the perceptions and approaches of teaching academics influences student learning outcomes (Biggs, 2003; de la Harpe et al., 2009; Martin et al., 2000;

Trigwell, 2012). Following a comprehensive review of the accounting education literature in Chapter 2, it is proposed that any exploration of group work in accounting needs to begin with an understanding of the perceptions and experiences of accounting educators. To that end, this current study makes an important contribution in providing for the first time, evidence relating specifically to an in-depth analysis of accounting academics' perceptions of group work and teamwork learning outcomes. In previous studies, academics' perceptions of teamwork have been considered generally as a component of a broader generic skills agenda, and with mixed results (Bui & Porter, 2010; de la Harpe et al., 2009; Oliver et al., 2011). This section provides a summary of the findings to the second research question: *How do accounting academics perceive group work within the accounting curriculum?* It also addresses Research Question 4, which asked (in part): *What are the factors that contribute to staff conceptions of group work in accounting?*

Seven components that underpinned academics' perceptions of group work processes are: learning, group work difficulties, individualism, efficiencies, negativity, skills, and coordination. The learning aspect represented the key element in the extraction of principal components. Given that learning is central to higher education, this result is not surprising. However the findings relating to academics' conceptualisations of how this learning is manifest in group work activities, did highlight important aspects that need to be analysed further. For example, the skills component that brings together only knowledge and critical thinking aspects of working together, is consistent with the broader generic skills studies. de la Harpe et al. (2009) also found that academics from different disciplines share a greater confidence and willingness to teach the more traditional, intellectually-based skills, such as knowledge and critical thinking, rather than teamwork skills or information technology, which tend to be perceived as employability skills and therefore the responsibility of workplace training. This result provides support for the argument that a gap exists between the expectations of accounting academics and employers/practitioners (Bui & Porter, 2010; Jones, 2017).

Nonetheless, using a positive and negative dichotomy, these seven principal components can be usefully divided into the perceived positive aspects of group work, namely, learning opportunities; skill development (knowledge and critical thinking); and efficiencies for staff and students; and the negative aspects that often preoccupy staff time, such as: administrative difficulties; the prominence of students' individualistic goals

and approaches; the general negativity experienced by staff and students; and issues relating to the coordination of ideas and individuals' reliance on lecturer intervention. An important finding is that this dichotomous split of the quantitative results complements the qualitative analysis of academics' interview responses, where academics very clearly identified with either the positive or negative aspects of group work.

Further analysis of the quantitative data indicated that female academics were statistically more likely to perceive that group work was important at university, and academics with 10 to 15 years of experience were more likely to strongly agree that group work aids engagement in learning, although this was not a linear relationship. Academics with 30 years' experience (level E professors) were the only group to disagree with the statement on engagement. This finding is consistent with Hancock et al. (2017), who suggest that more senior professors and associate professors are focused more on 'the extrinsic rewards of research' (p. 27), whereas less senior staff members who are 'less research active and carry a higher teaching load' are more interested in teaching matters (p. 27). This propensity for gender, years of experience, and formal teaching qualifications to influence academic perceptions, as it did in de la Harpe et al. (2009), is worth noting for further research where a larger sample size may increase the opportunity for more reliable statistical testing. Interestingly however, in the current study, the demographic characteristics of the 23 academics surveyed shared a remarkable similarity to the profile of the contemporary Australian academic workforce, despite the small sample (Bradley et al., 2008; Hugo, 2005). For example, most participants were aged between 45-64 years; with more than 10 years' teaching experience; and had no formal teaching qualification. Overall there were more males represented; and although most participants were level B or C academics, the two level A participants were female and the two level E professors were male. These results are important given the statistically significant divergences found.

Respondents' demographic information is found to be significantly related to a number of influences on an academic's decision to use group work in accounting. Specifically,

- Confidence to assess group work is related to teaching qualification
- Industry/employer expectation is related to no teaching qualification
- Willingness to teach team work is related to female participants
- Managing workloads is related to male participants.

These results, which are also consistent with de la Harpe et al. (2009), suggest this is an opportune time to introduce quality professional development around group work, and more importantly a commitment by academic managers to support staff development in this area (Harvey, 2017; Knapper, 2016). In the same way, providing staff with the necessary resources and support to engage with the literature and theoretical underpinnings of group work and the teaching of teamwork skills, will enable them to embrace the strong research-teaching nexus that sustains the growth of cooperative and collaborative learning in higher education (Hancock et al., 2017; Johnson & Johnson, 2009). However, one important barrier to change is also signalled in these results. While further research is needed to explore the apparent gender divide, the immediate consequence is the potential risk of a lack in leadership support to advance pedagogical practice in this area of need, since the demographic that is least supportive of group work and teamwork skills within the accounting curriculum, is the same one that traditionally holds the senior leadership positions within schools, faculties, and institutions (Hancock et al., 2017).

10.2.1 Product outcomes over learning outcomes

Another important finding, relating to academics' initial open-ended responses to the interview questions, was the recurring themes that represented decision frames and clearly informed an overall perspective that persisted throughout the survey interviews. As noted in Chapter 7, Stalans (2012) explains the importance of being aware of the influence framing effects can have on respondents' opinions, because they generally highlight the level of importance assigned to particular components rather than simply being ease of recall. Furthermore, decision frames emanate from 'a web of beliefs, attitudes, values, and schemas' (Stalans, 2012, p. 85).

According to the model of key themes that was developed, and presented in Figure 7.2 (see section 7.1.5), there are four domains, embedded in a 2x2 matrix, which represent how accounting academics perceive group work within the accounting curriculum (RQ2). Perceptions relating to the positive aspects of group work for students revolve around the opportunities it provides for socialising, for career aspirations, and for helping each other achieve a better end product. For staff, the positive experience relates to group work as an effective teaching tool to reduce marking loads and manage classes. The lower two quadrants of the matrix present the negative impressions of group work. In relation to students, academics commonly perceive assessment to be the overarching problem.

Specifically, student characteristics, such as individualism, free-riders, and international students are seen to impact assessment through dysfunctional group work processes and poor quality end products. According to Ramsden (2003), students perceive that assessment is the curriculum. Therefore, it is significant that these results indicate a general belief from accounting academic staff that assessment of group work is problematic. Furthermore, if assessment signifies the quality of teaching, as well as the quality of learning (Biggs, 2003; Ramsden, 2003), it is not surprising that the accounting profession and employers have identified a critical gap in the accounting curriculum, particularly in relation to interpersonal, teamwork and general people skills. Concurrently, academics also acknowledged practical issues, the lack of training, and other administrative burdens, as having negatively impacted their perception of group work in accounting.

Despite the dichotomous split between the positive and negative perspectives of academics, in relation to their underpinning initial beliefs about group work in accounting, a key and important observation is an apparent preoccupation with product outcomes. Student learning and/or the teaching of group work dynamics and teamwork skills are rarely mentioned. That is not to say that accounting academics believe teaching and learning is not important; clearly it is, or they would not have been so generous in participating in this study. The issue however, is that there appears to be a symptomatic view that mechanisms and techniques are more important than learning outcomes and what is being assessed (Knapper, 2016; Ramsden, 2003).

Nevertheless, accounting academics have overcome many hurdles and challenges in changing their teaching practices over the years, and since the majority of respondents in the current study had over 10 years' teaching experience each, it was useful to investigate what they perceived is necessary to ensure students have a successful group work experience. The following section highlights what accounting academics perceived is necessary to make group work 'work'.

10.2.2 Making group work 'work'

The key elements of successful group work in accounting were perceived to be three-fold: the personal attributes and values of students; promotive interaction; and control. Only promotive interaction aligns directly with the cooperative learning literature and SIT (Cottell & Millis, 1992; Johnson & Johnson, 2005a), although it could be argued that the student attitudinal characteristics identified, such as respect, tolerance, empathy, and

enthusiasm, are embedded within the definition of promotive interaction. Johnson and Johnson (2013, p. 106) state that 'promotive interaction occurs when group members encourage and facilitate each other's efforts to achieve the group's goals'. Furthermore, within a SIT framework, it is held that 'positive interdependence results in promotive interaction' (Johnson & Johnson, 2009, p. 366). Conspicuous by its absence from the discourse in this study however, is any reference to interdependence. There is no mention of the word interdependence within this data set, nor is there any recognition among the academics interviewed that individual students might need group work, or more specifically fellow group members, to succeed or achieve particular learning outcomes, which is the key defining characteristic of interdependence (Johnson & Johnson, 2005a; 2009). There may be any number of explanations for this absence, such as the participant academics may consider groups as a single entity and hence interdependence is taken for granted (Johnson & Johnson, 2013). Alternatively, in line with the analysis that this theme is based on promotive interactions rather than interdependence per se, the respondents' focus on individual student traits rather than making references to the behaviour of unified, coherent groups, highlights a possible disconnect between theory and practice in the accounting classroom. This is an area where further research could better inform debate on how underlying perceptions are possibly driving the approaches and conceptions of academics.

The perception of control provides a glimpse of how opinions varied and helps to explain the conceptual interaction between student attitudes and values and promotive interaction. Control focused on the teacher's role in the group work relationship. Figure 7.4 (see section 7.2.2) illustrated this concept of teacher control along a continuum. At one end of the spectrum, where control of group work processes is the domain of students, success is considered to have been achieved when the teacher's role is simply to monitor proceedings and not to interfere. As student control succumbs to greater teacher control over group work processes the perception is that teachers are more facilitators, than planners, and finally directors of group work processes where teachers dominate control of all aspects of the group work activities. The lack of student autonomy at this extreme suggests success occurs where student values and attitudes are not relied upon and promotive interaction requires structured direction, which derives from the early 1990's perspective of cooperative learning strategies as employed by some accounting researchers, such as Cottell and Millis (1993) and Ravenscroft et al. (1995). From this

control perspective, cooperative and collaborative learning can also be more meaningfully explained.

Where cooperative learning is considered in terms of a structured, teacher driven technique, the teacher has control (Millis, 2010), and where collaborative learning is defined as students supporting each other in negotiated relationships (Bruffee, 1995), while relying on their peers to define the curriculum, in conjunction with the lecturer (Ravenscroft et al., 1999), students clearly have autonomy and control. In this case, each perspective represents positions at opposite ends of the control spectrum. However, the contemporary concept of cooperative learning (CL) has evolved to include three broad forms of group work, formal, informal, and cooperative long term base groups, and/or a combination of all types of CL (Johnson & Johnson, 2016). In addition, where collaborative learning is commonly considered to be an umbrella term covering all types of joint interaction in learning situations (Smith & MacGregor, 1992), it is clear that the two terms can legitimately be used interchangeably. The findings in this study however, highlight the importance of understanding the degree and nature of control within the interaction learning environment, thereby adding a useful dimension that helps situate group work and the type of CL/collaborative learning in terms of control.

10.2.3 The curriculum perspective of teamwork skills

Finally, academic participants were asked directly to share their perception of teamwork skills within the accounting curriculum. The participating academics overwhelming agreed that group work was necessary to facilitate the development of teamwork skills in accounting students. However, the conceptualisation of what that means for accounting academics is interesting. Consistent with earlier studies (Courtis & Zaid, 2002; De Lange et al., 2006; Kavanagh & Drennan, 2008), the evidence suggests a lack of alignment between the rhetoric of desired skills based outcomes and the teaching and assessment of those skills, specifically teamwork skills. The role of the accounting curriculum was perceived to be more of facilitation, where group work was the vessel offered to enable student skills to develop. From this overall perspective, four integrated themes emerged.

Teamwork skills were perceived to be: (1) existing presage characteristics of students; (2) experiential, internalised through experience; (3) a product or commodity to be used to achieve a goal; and (4) more relevant to the workplace (the horizon perspective). Interestingly, the hierarchical nature of these themes also represented different elements and together created an input-process-output model, which this study

has aptly called the ‘EeCH curriculum model of teamwork skills’, representative of the first letter in each of the concepts but also powerfully illustrating the missing component – ‘T’ for teaching (taking poetic licence on the spelling). The absence of a teaching perspective highlights an existing gap that validates previous criticisms of accounting being too technically focused, at the expense of developing teamwork and other generic skills in accounting students.

Notably, throughout the extended open questioning of academics there was also little or no reference to the opportunity for knowledge transfer or content mastery within the structure of group work activities. Given the history of accounting education being criticised for its overly technical focus, this is surprising. It implies that a gap also exists between group work and knowledge learning outcomes and the opportunity for deep learning through a collaborative approach. If group work is only perceived as a mechanism for ticking off the inclusion of teamwork learning outcomes within a unit/course, or for simply reducing workloads in overcrowded classrooms, then the key message of cooperative and collaborative learning has been lost. The knowledge, skills, values and attitudes needed to adequately prepare accounting graduates to enter the professional space, needs to be conceived holistically, and as an integrated and cohesive whole.

10.3 The underlying constructs of student perceptions and experiences of group work

Student perceptions and experiences of group work also provide important insights into the identified problem of skills development within accounting education. Entwistle (2010, p. 13) points out that ‘it is not so much the teaching-learning environment we provide that affects the learning approaches of individual learners, as their perceptions of it’. This section therefore discusses the findings of the survey conducted with 224 accounting students, representing 21 countries of origin, and who were located across three geographically and typologically different Australian universities. Using a multi-level nested sampling design, the student participants were sourced from a purposive sample of three third year units previously investigated in the archival research of unit outlines and the academic unit coordinators associated with 17 of those units. The case study units were chosen using a maximum variation strategy.

The key research questions that the student survey sought to answer were: RQ 3 *What does group work mean for accounting students at university?* and RQ 4 *What are the factors that contribute to student conceptions of group work in accounting?*

Exploratory factor analysis (EFA) uncovered two very clear and interpretable solutions. Firstly, the overall perceptions of group work were analysed, which not surprisingly, showed that students with positive experiences of group work had a preference for working with others, while those who had not had positive experiences preferred to work on their own, and suggested that group work was generally perceived negatively by students. This finding is a clear indicator that accounting educators need to consider student experience more closely; a goal universally pursued at the institutional level, and now formally regulated by the Australian government (HESF, 2015).

Secondly, the constructs underlying students' preferences and opinions of group work in accounting were identified in the second EFA. Using principal axis factoring (PAF) with Promax rotation, a five factor solution was extracted from 30 group work variables.

The five common factors, representing the underlying constructs in the current study, were labelled (in order of their initial Eigenvalues) interdependence, skill development, personal, individualism, and process difficulties. Notably, the majority of the correlating coefficients formed around interdependence and personal traits or characteristics. This is an important finding. With the exception of factor one, interdependence, the current results for the minor factors appear to be deviating somewhat from the individual components of cooperative learning, espoused by the accounting literature (i.e. group formation and group processes) (Cottell & Millis, 1992; Ravenscroft et al., 1999). Further analysis to ascertain the relative ranking of these factors found that, on average, there was most agreement for the survey questions related to personal attributes. Dominant individuals, unequal commitment to participation, and meeting times, and individuals with inadequate technical skills, combine to ultimately signify the reason why most students do not like relying on others for their marks, which also loaded onto the personal values construct. Supporting the independent results found in the academics' survey, as discussed earlier, students are united most of all with the perception that the personal traits and values of their peers are what impacts their experiences and perceptions of group work in accounting. Notably, while some of the observed variables that make up the personal attributes factor have previously been identified individually

as concerns for students completing group work in accounting (see for example: Dyball et al., 2010; Kennedy & Dull, 2008; Reinig et al., 2014), this is the first time these variables have been grouped together to form an underlying construct, and more importantly, provide results where personal attributes and values heads the ranking of group work aspects on which students from each of the case study sites agree. Over 15 years ago, Courtis and Zaid (2002) similarly found that accounting graduates perceived personal values and attributes added to difficulties experienced with interpersonal relationships in work teams.

Process difficulties (factor 5), although not as statistically strong a construct, ranks second, relative to the other factors, where in combination students generally agree that keeping track of ideas and monitoring and evaluating group processes is difficult. It is this type of processing that the literature identifies as one of the key aims to learning to work together (Jaques & Salmon, 2007; Johnson & Johnson, 2013), and provides compelling support for necessitating the teaching of teamwork skills in the accounting curriculum.

Following personal attributes and process difficulties, the remaining mean rank order of combined factor scores was (3) skill development, (4) interdependence, and (5) individualism. These results indicate that there was least agreement for suggestions that individualistic goals are prominent in group work, which is promising. Interestingly however, interdependence, which represents the opposing conception, is also ranked low, only marginally above individualism. It appears the participant accounting students in this study are least likely to conform on the theoretical concepts that generally underpin cooperative learning. This implies that affective states and psychological well-being are more important to the majority of students. Notably SIT and cooperative learning strategies are typically focused on task and goal interdependence (Johnson & Johnson, 2005a), and therefore the variables making up the interdependent construct in this study also represented aspects of goal/task interdependence, such as team ability, providing feedback, team effectiveness, and achieving better assessment outcomes. In terms of teaching teamwork skills, these findings further highlight the potential for improving learning outcomes by first concentrating on affective learning and affective interdependence, which theoretically would lead to positive promotive interaction and effective group work outcomes.

In addition, consistent with prior Australian studies in accounting (Keneley & Jackling, 2011), marketing (Summers & Volet, 2008), and across mixed disciplines (Moore & Hampton, 2015), cultural demographic characteristics were found to significantly influence the perceptions and experiences of group work for accounting university students, which in the current study subsequently influenced the outcome of the factor analysis. Specifically, English-speaking domestic Australian students were more perceptive of the impact personal attributes had on their group work experience, whereas Asian students and those with English as a second language, agreed more with the concept of interdependence and the mutual benefits of group work.

Culture and language also resulted in a statistically significant influence on the skills development construct, again supporting earlier studies (Hwang et al., 2005; Hwang, Lui & Tong, 2008; Keneley & Jackling, 2011). Past experience and national cultural dimensions (Hofstede, 1986; Summers & Volet, 2008) are often considered as confounding factors underpinning the cultural differences identified in the teaching and learning environment. Hofstede (1986) in particular, notes the strong influence of collective cultures such as those in South East and East Asia, on a preference for group study. However, it is also plausible that international students simply understand and appreciate the need to work together, especially with English-speaking students, to be able to attain the same high academic standards to which they are accustomed. For Australian students, the personal attributes that cause concern include values and work ethics, associated with free-riders, and dominant individuals, as well as language barriers.

The complexities surrounding cultural diversity within groups will be addressed further in the following section, which reports on the in-depth interviews with students. However, it is interesting to note that the result for interdependence was also marginally affected by whether or not students had previously deferred their university studies. Process difficulties similarly showed a small size effect relationship to deferred studies. Although this result is small, it parallels the significant relationship that found South-East Asian students at Uni A were more likely to have completed other studies before entering the degree level at university. Conversely, North-East Asian students at Uni C were more likely to have entered university straight from senior secondary school. Clearly these results may be influenced by institutional and government policies regarding enrolment and/or international target markets, but nevertheless the institution attended also featured as a significant influence on the remaining latent factors extracted. This is despite there

being no overall significant difference in the cultural profile of the student cohorts across each of the three research sites.

Notably, the factors impacted by the university attended differed to those of language and culture, suggesting that institutional culture, distinct from ethnic or national culture, is worthy of further investigation. Institutional differences had a highly significant influence on how students perceived process difficulties, and a marginally significant influence on perceptions of skill development and individualism. Post hoc comparisons identified that it was students at Uni B who had significantly different attitudes on all three aspects. Interestingly, although Uni B students identified more with a preference for individualistic goals, they did not align with the general outcome of experiencing process difficulties. Clearly there are likely to be numerous explanations, but it is feasible that the earlier finding, which showed 100% of all the units at Uni B had some form of assessed group work, is the most likely contributing factor. Students at Uni B would be well skilled and experienced with group dynamics and the group work environment generally; however, a direct implication to always being exposed to group work assessment is the reduced opportunity to achieve individual learning goals and/or be assessed on your individual merits. This likely direct impact of the extent to which group work is used is also consistent with the findings for skills development. Uni B students, who were constantly exposed to group work activities, were positive about associated skills development, whereas students at Uni A, where only one unit offered group work in accounting (the lowest incidence across the eight universities examined), had a negative average score, suggesting that they disagreed that group work helped skill development. The difference between Uni A and Uni B responses was statistically significant.

10.3.1 Complementary perceptions of the teaching context

The discussion to this point has focused on the stage one investigations of this exploratory study. The aim of stage one was to provide complementary information for the purpose of identifying the key aspects of group work in accounting and to help establish the issues that needed more in-depth investigation in stage two. A key outcome of stage one has been the very clear complementarity aspect of the findings from all sources, the documented information in unit outlines, accounting academics and students. As outlined in Chapter 4, this provides the foundation for the sequential design of the study, which next moved into the expansion phase of stage two. The key issue related to how individual

students conceptualised the phenomenon that is group work. The survey data highlighted a complex array of interrelationships. Therefore, the phenomenographic interviews focused on better understanding these experiences and what group work actually means for students, in their particular context.

10.4 A phenomenographic perspective of students' experiences of group work

A phenomenographical methodology is best suited to further uncover answers to Research Question 3, *what does group work mean for accounting students?* The aim was to derive from student interviews an inclusive hierarchy of their structure of awareness, and identify the qualitatively different ways in which they experience group work in accounting.

Preliminary categories were first extracted for each of the case study research sites. The initial analysis identified two overarching dimensions that were common across all samples. These were labelled 'open' and 'closed' approaches to group work. Openness broadly relates to an unimpeded approach to interacting with others. It is a willingness to consider alternative viewpoints and opinions; to accept and embrace diversity; to be responsive to the value that all group members can offer; and to be flexible and adaptable to new situations. Those who approach group work with a closed attitude tend to focus inwardly on self and their own immediate circumstances, individualistic goals, inputs, outcomes, and consequences. That is not to say that the closed perspective is against group work: in fact in many cases individuals with a closed perspective recognise the benefits of working with others to improve their personal position or performance, although interaction is typically constrained and limited to only what is needed to satisfy the individual's task goal.

In addition to the open/closed dimensions, results from the preliminary analysis highlighted institutional characteristics that differentiated the three case study sites. Three models were developed to help display the key features demonstrated. Specifically, Uni A students' approaches tended to focus on personal attributes, such as closed individualistic and competitive approaches, or openness, in the form of respect and friendliness. The model devised for Uni B was aptly named 'double-edged sword', to metaphorically illustrate the existence of a symmetrical bilinear hierarchy. Uni B students clearly struggled with conceptualising both the positive and negative aspects of group work simultaneously. They subsequently described concurrent feelings of being open to the opportunities of group work interactions, but challenged by the closed self-oriented

desire to withdraw to personal goals. Students at Uni C differed again, with an achievement goal orientation. Their conceptions of group work focused on either performance goals or learning/mastery goals, with the various categories in each assigned as open or closed dimensions. Notably, despite their differing perspectives, the task was important to all students at Uni C. The main goal was either to improve task performance outcomes or to work together to improve technical knowledge outcomes.

Significantly, the preliminary analysis of each case study provided insight into the similarities and differences between them. Consistent with the quantitative analysis and prior studies, student perceptions appear to be influenced by the nature and extent to which group work is used at their institution, as well as other aspects of the teaching and learning environment (Entwistle, 2010; Prosser & Trigwell, 1999). For students at Uni A where assessed group work is rarely used in accounting, what was forefront in their minds was the individual, and the personal characteristics of individual group members. It is logical to assume that with few experiences on which to draw, the individual, rather than the group as an entity, would be central to their perceptions. At the other end of the spectrum, all accounting units at Uni B had assessed group work. In this situation, the data revealed a strong focus on the group, group processes, and the skills and benefits of working in groups. Students' openness to sharing and working with others was also apparent with a 100% response rate to participation in this study. However, an interesting addendum was the students' simultaneous sense of loss for individual goals and identity. The resultant conflict of purpose is plausibly explained from the perspective of group work being a double-edged sword. The demographic profile of the third case study site at Uni C is also feasibly linked to the model of achievement goal categories derived from student responses at that institution. Uni C is by far the largest university of the three in this study, and in combination, the data collected from unit outlines, academics, and students, suggest that group work is a tool or mechanism used to help manage large classes, marking loads, and to help students work together to achieve learning outcomes related to technical knowledge. Uni C unit outlines also made no claim to develop team work skills in their assessed group work, despite one unit having group work comprising 100% of the available grade for students. This focus on performance and technical knowledge is also consistent with one of the classes at Uni C having a significantly lower response rate to participating in this study about group work.

10.4.1 The combined outcome space

The culmination of this phenomenographic investigation is the outcome space matrix (Table 9.3 (see section 9.6)) that illustrates the referential and structural aspects of the interrelationships between the combined categories of description. It provides a comprehensive model to better understand not only what the group work experience means for accounting students, but also how each category varied in an integrated hierarchical manner across common theme areas. This 'structured pool of ideas, conceptions, and beliefs' (Marton, 1981, p. 198) provides a rich source of data for improving pedagogical outcomes in accounting education. It can also help to inform the accounting profession about the ways in which aspiring accountants, undertaking studies for their professional qualification, might interpret aspects of reality when it comes to group work and achieving teamwork, interpersonal, and professional values and attitude learning outcomes.

The six qualitatively different conceptualisations of group work represent the categories of description extracted from the combined data in this study. Consistent with the preliminary analysis, the first three categories, avoidance, task efficiency, and concept mastery (Category A-C respectively), represent the 'closed' approaches to group work. The emphasis is self-oriented, and based on a preference for either avoiding group work altogether or progressively acknowledging that there are efficiencies to be gained from sharing work among group members, and that others can potentially help achieve individual learning mastery goals. The remaining three categories, at the higher end of the hierarchy, cooperation, skills development, and relationships (D-F respectively), relate to students who expressed a genuine openness to cooperating with others to achieve group goals; recognising the growth and opportunities for developing a range of skills; and ultimately to build close personal relationships. The theoretical underpinning of SIT, and prior research in cooperative learning, align with the foci for this group.

The theoretical contributions of this study will be discussed further in the following section, although it is important to point out here that in an earlier study, Tempone and Martin (1999) identified a similar divide in what they classed as 'surface' and 'deep' approaches to group work, corresponding to the seminal phenomenographic learning studies of Marton and Säljö (1976, 1984). In the current study however, there are no assumptions made about student learning, and the focus was on a much broader question based on what group work meant to accounting students in the survey. In

contrast, Tempone and Martin (1999) questioned students about the completion of one individual assignment, not a group assignment, but where students were encouraged to work in study groups. Clearly the 'surface' and 'deep' dichotomy is more relevant where the phenomenon of interest is an assessment task. Despite the clear synergies between the surface/deep approach and the closed/open dimensions described in this study, it is argued, for example, that individuals who avoid group work are closing themselves off rather than taking a superficial surface approach to interaction. If there is no interaction, there can be no distinction between surface or deep approach to non-existent group work, and there is no interdependence (positive or negative) (Johnson & Johnson, 2013). In addition, it is reasonable to suggest that for a high achieving individualistic type of student, working alone could promote deeper learning. The evidence shows that group work and learning are not synonymous.

As is the norm in phenomenographic analyses, the categories of description derived in the current study are closely related in an inclusive hierarchy. This means that individual students are not confined to one category. They can move between the categories and indeed should be encouraged and supported to evolve from a closed perspective to the open approaches described, in order to develop the teamwork and people skills sought by employers, the profession, governments, and institutions. The following section describes the intricacies of how each category is critically different and yet intimately related along five theme areas.

10.4.2 Structural themes

In any given situation some things are more relevant than others (Marton, 1994). Therefore, the aim in phenomenography is to identify the themes that are most common in students' experience of group work and map the different ways these are experienced across the categories of description in order to gain a clearer picture of the intertwined referential and structural aspects of the experience. Importantly, each of the preliminary categories described previously comprised both referential and structural aspects. The outcome of this further in-depth analysis to separate and highlight the descriptions of what group work means (the categories of description) from the key areas of expanding awareness for accounting students, resulted in five main themes. These were: performance, learning, group processes, time horizons, and feelings. The range of variation in these key structural dimensions, across each category of description, also pinpoints the underlying epistemological assumptions that drive students' perception and

experiences of group work; and thereby provides the empirical evidence on which to base future interventions, research, and policy decisions.

Reinforcing the concept of 'expanding awareness', it is also notable that the basic need centres on performance. The critical variation between categories ranged from performance relative to grades, to shared task goals, future aspirations and ultimately to making good friends, which shows clear and distinguishing features of performance that relate to each category. However, the primary position of the performance theme is consistent with the teaching and learning literature that finds students are first and foremost concerned about marks and assessment and secondly about what that means for their learning, as demonstrated with learning being the second theme in this space (Ramsden, 2003). The third theme of expanding awareness, group processes, is the only one that relates directly to the key elements of cooperative learning as espoused in the literature (Cottell, 2010; Johnson & Johnson, 1989a; 2009), and is multidimensional, as argued in Chapter 3. In this study, the group processes theme incorporated all of the five key elements of cooperative learning: interdependence, individual accountability, promotive interaction, social skills, and group processing (reflection and monitoring group processes), but notably only in the three openness categories. Not surprisingly, and in line with the theoretical foundations of SIT, no interdependence and negative interdependence feature in the closed individualistic approaches to group work, where individualism, conflict, and competitiveness dominate the dialogue (Johnson & Johnson, 1989a). The marrying of SIT and the phenomenographic inclusive hierarchy in this way provides a new perspective to help educators better understand the theoretical aspects of group work, within the practical and structural dimensions described.

Time horizons, the fourth theme identified, highlights an important area that is often implicit in many group work studies, and nearly always identified as a general area of concern and/or listed as both a strength and weakness for students undertaking group work in accounting (Caldwell & Weishar, 1996; Dyball et al., 2007; Gowri Shankar & Seow, 2010; Opdecam & Everaert, 2012; Opdecam et al., 2014). Consistent with the prior literature, time is listed here as a key theme that was regularly part of the discourse, from group work being a waste of time, to efficiencies saving time, time management skills, and students wanting more time to spend together in the open approaches to group work. The critical differences between conceptions of time influences on group work clearly forms a distinguishing feature that helps to delineate the categories of description.

Most significantly, the final and all-encompassing theme area is 'feelings'. The critical variation here is that for Category F, the highest in this inclusive hierarchy, group work is considered a life skill anchored on positive human relationships (Johnson & Johnson, 2013). It is about making connections and building relationships, seen as vital for commitment, to each other, to the task, and to the purpose and success of group work. Students explain the importance of learning about people, about group dynamics, learning to get on with other people, getting to know and understand a little about the individuals within your group, taking time to appreciate and value different perspectives, making friends, and most importantly how that impacts on their emotional and psychological well-being (Baker et al., 2013). In a phenomenographic study of academics' experiences of growth and development, Åkerlind (2005d) described similar high level outwardly focused feelings as going 'beyond personal enjoyment to include a more altruistic focus on ethics, integrity and sharing with others' (p. 17), which also appropriately defines student feelings at this level. Notably, enjoyment is designated as the previous level (in Category E) for students focused on the skill development opportunities in group work. It goes without saying that in a world of aspiring accountants and future business leaders, operating at this level would be a very good place to be.

At the other end of the spectrum, Category A conceptions describe students with an avoidance objective towards group work (Tempone & Martin, 1999), who regularly speak of anger and frustration, particularly in relation to all the other theme areas identified, i.e. performance, learning, group processes, and time. They lament the perceived lack of commitment from others, and are frustrated by the potential of having the group work aspect of their studies reflecting poorly on their overall results. Clearly, these underlying negative feelings are driving a self-oriented, inward focus on individualistic goals, and continue to promote a closed perspective of group work. According to SIT, this type of individualistic approach means interdependence is non-existent (Johnson & Johnson, 2009). For students in Category B, there is a distinct move to an acceptance of these limitations. The efficiency perspective promotes compromise on effort but also on potential grades in group work, having considered the cost/benefit analysis. Ultimately, this group seek satisfaction in simply completing the task. For some in this category, group work is a nuisance and annoying, for others it provides security, but in both cases feeling satisfied with the end product cements their conceptions of group work at this lower level (Opdecam & Everaert, 2012).

Students in the third ‘closed’ category, the content mastery concept, expressed feelings of confidence when working with others. For many in this group, initial feelings of inadequacy encourage a strong one-way reliance on other group members. Category C borders the interdependent groups but is clearly locked into the closed individualistic mode by the persistent emphasis on personal achievement and the feelings of self-assurance that it enables. Importantly, these feelings align with Bandura’s (1986) theory of self-efficacy, where resilience and confidence are key components. Furthermore, as noted in Chapter 3, since self-efficacy beliefs are created through mastery experiences, social modelling, social persuasion, and physical and emotional states (Bandura, 2012), the source of self-efficacy is key to developing improved motivation, learning, and personal interactions. Category C also encapsulates the competitive high achiever, who is performance driven and thrives on personal achievement and competing with peers in homogenous groups (Johnson & Johnson, 1989a). It is evident, that although still inwardly focused, students in Category C have the tools on which to build teamwork and interpersonal skills, and therefore to move to the next level where positive interdependence prevails.

Overall, the findings of this phenomenographic analysis point to feelings of respect being the key component for building and developing a more open and cooperative relationship. Respect is seen as crucial for any type of meaningful cooperative learning effort (Johnson & Johnson, 2013). In the current study, many students who were angry, hurt and frustrated, longed to be respected. This included students of all academic abilities, gender, age, and culture. Therefore, in describing the key elements that distinguish the categories of description, it is understandable that students’ desire to collaborate and cooperate, in the first of the interdependent categories, is underpinned by a common feeling of being respected. The inclusive nature of the hierarchy also means that respect is deeply embedded in the following categories where feelings of enjoyment and friendship transpose.

There are important similarities and differences between the five key thematic areas of relevance derived from this sample, and the overall six categories of description, and two overarching dimensions (open and closed), which together make up the outcome space that comprehensively describes student experiences of group work in accounting education in this study. Each category is similar in the prominence it gives to the five themes of expanding awareness: performance, learning, group processes, time horizons,

and feelings. For each theme, categories are interrelated through an inclusive hierarchical relationship, where the higher level categories evolve by developing and building on the conceptions of lower level categories. Concurrently, the six categories of description, avoidance, efficiency, mastery, cooperation, skills, and relationship, also represent the six critically different ways of conceptualising the phenomenon of group work.

This is group work in accounting through the lens of a phenomenographic perspective (Bowden & Green, 2005; Marton & Booth, 1997). In combination, this information provides valuable insight to enable a better understanding of group work in the accounting context. From this perspective, it is also important to realise that, at the highest level, and with respect and relationship, the mechanics of group work tasks, the structure, control, or what the teacher does generally, become less important. In fact, overcoming obstacles and solving problems provides fuel and energy at this level. Notably, this is the pinnacle. Few students will have an innate ability to attain this highest level without guidance and direction. It is therefore incumbent upon accounting academics, their departments and institutions, to address student needs, and employer and professional demands, and incorporate affective learning outcomes, and teamwork skills teaching into the accounting curriculum. The following section explicates the theoretical dimensions that provides compelling support for these results.

10.5 The theoretical underpinning of interdependence

In Chapter 3, a theoretical model was developed to guide the execution of this research. Evolving from the commonalities shared across a range of theoretical perspectives, Figure 3.4 (see section 3.5.1) demonstrated how the concept of interdependence is central to the interacting key dimensions of group work, namely: the individual, the group, and the context.

In answering the final research question (RQ 5), *How is the theoretical concept of interdependence manifested in group work within accounting education in universities?*, the key elements of Social Interdependence Theory (SIT) were used as a reliable and previously tested measure of interdependence (Johnson & Johnson, 2009). Furthermore, evidence collected from a 50 year meta-analysis of cooperative learning studies that had utilised SIT in the university context identified three key theme areas: individual

achievement, interpersonal relationships, and psychological health[74] (Johnson, Johnson, & Smith, 2013).

Notably, in the current study, the term 'interdependence' was never used by students or academics, although, as explained earlier in section 10.3, the exploratory factor analysis identified interdependence as the dominant underlying construct for accounting students, with a statistically strong measure of reliability, which means that implicitly everyone shares a similar understanding of what interdependence means. Interestingly however, in terms of overall agreement that interdependence is part of group work in accounting, it ranked a low fourth out of the five factors extracted. This suggests that although the questions relating to interdependence were closely related and were a good measure of the construct, it does not appear to have the desired influence in the group work activities of accounting students. Students most strongly agreed with the influence of personal factors on group work. What is more, these results were statistically related to culture and language, with international students having higher regard for interdependence in group work, while their English-speaking domestic Australian peers emphasised the impact of personal attributes. The apparent opposing relationship between these two raises concerns, and supports the conclusion of Summers and Volet (2008, p. 369) that 'universities should take measures to promote culturally mixed group assignment work in order to achieve educational and social goals of internationalisation'.

The results of the phenomenographic analysis provided additional evidence of the ways in which interdependence is manifested in the conceptualisation of cooperation, skills development and personal relationships, quintessential exemplars of positive interdependence in the SIT model. In fact, the existence of the closed individualistic approaches is also appropriately described in SIT, under the banner of no interdependence or negative interdependence. Most importantly however, the overall results highlight the greater importance of personal attributes, interpersonal relationships, and the emotional aspects of group work that are revealed in the underlying feelings expressed by students during the in-depth interviews. Consequently, the overall result supports the use of the broader, integrative theoretical framework established in Chapter 3. Although SIT encompasses many components of other theoretical perspectives, much of the research in

[74] Psychological health in group work is defined as: 'the ability to develop, maintain, and appropriately modify interdependent relationships with others to succeed in achieving goals' (Johnson & Johnson, 2013, p. 99).

this area focuses on positive outcome interdependence and specifically goal interdependence (Johnson & Johnson, 2016). It could be argued that in order to achieve these types of interdependence, attention first needs to focus on a broader underpinning view.

From a more generalised interdependence-based perspective of group work, interaction is the function of individuals' needs, thoughts, and motives, in relation to one another and the group entity, in the context of specific interdependent situations (Rusbult & Van Lange, 2008). A key feature in the study of groups, prevailing across domains and different fields of research, is the triadic reciprocal relationship between the individual, the social/group situation, and contextual or environmental considerations, as illustrated in Figure 3.4, and succinctly summarised in the theoretical framework developed in Chapter 3. The way in which different types of interdependence (cognitive, behavioural, affective, means, outcome, and boundary), the nature of the interdependence (positive/negative); and the degree of interdependence (high/low/no), is perceived within each component, influences the interactions between these components, that is: the group and the individual; the group and the context; and the context and the individual. Within the context of an internationalised higher education sector, in which accounting attracts more culturally diverse students than any other discipline, the more immediate problem highlighted here appears to be related to the need to address the personal aspects, including the emotional and psychological well-being of individuals and their relationship with others i.e. affective interdependence. Notably, within SIT, Johnson and Johnson (2013) have identified the importance of quality relationships and psychological health in relation to promotive interaction. However, Johnson and Johnson (2013) state that 'the basic premise of social interdependence theory is that the type of interdependence structured in a situation determines how individuals interact with one another which, in turn, determines outcomes. Positive interdependence tends to result in promotive interaction' (p. 89). The results of this study suggest that rather than starting with positive interdependence which promotes promotive interaction, the inverse is probably true. If quality relationship and psychological health facilitate promotive interaction, it is that promotive interaction which enables positive interdependence. It is a subtle difference, and in reality occurs concurrently, but from a theoretical perspective it is conceptually logical and empirically supported by the findings in this study, to argue for a greater focus on the inverse relationship. As noted earlier, SIT tends to focus on

positive goal interdependence, and this study has found that in accounting education it is reasonable to assume that many students are not yet prepared for that type of interdependence, which would help to explain why group work has previously caused much angst.

The following discussion of this lack of attention to affective learning outcomes, and the lack of teaching teamwork and interpersonal skills, provides an appropriate summary and epilogue to the preceding presentation of the research findings. In combination, the results have highlighted two key missing links in the way group work is used, and experienced, in accounting education at university.

10.6 Affective learning outcomes: a key missing link

Affective learning relates to values, behaviours, and attitudes (Shephard, 2008). The results of this study support the argument that the issue is not primarily about the structure of group work tasks, or the skills per se, but it is about an identified lack of values, attitudes and personal qualities that enable those skills to develop, in a conducive respectful and collaborative environment. In other words, there is a lack of awareness of affective interdependence. Without respect and trust there is no relationship, without relationship there is no cooperation (Johnson & Johnson, 2013). This theme of affective interdependence, which emanates from the study, is aptly summarised at the start of this chapter, in the opening quote by Dr. Maya Angelou, an American author and civil rights activist. When questioned, both academics' and students' recall of details about what or how group work was used in specific units was generalised; however, the recurring refrain was how group work made them *feel*. The misunderstanding, which has accentuated the difficulties of group work, is that few students achieve the necessary affective learning outcomes. It is well established in the psychology literature that learners have affective/emotional/psychological 'preferences and capabilities', as well as cognitive and physical characteristics that 'shape the way they learn'(Gibson, 2011, p. 1) and interact together, in collaborative learning environments (Baker et al., 2013). The hierarchical nature of the affective domain, which formed part of Bloom's original taxonomy of educational objectives (Krathwohl et al., 1964), suggests that (in order) students need to be able to demonstrate 'the ability to listen, to respond in interactions with others, to demonstrate attitudes or values appropriate to particular situations, to demonstrate balance and consideration, and at the highest level, to display a commitment to principled practice on a day-to-day basis, alongside a willingness to revise judgement and change

behaviour in the light of new evidence' (Shephard, 2008, p. 88). In the current study, these were also the attributes that the accounting academic participants identified as the key components for successful group work.

Clearly, the implication of this finding, for positive interactions and affective learning outcomes, is pivotal. In the context of group work at university, students are continually challenged by different goals, expectations, personality types, power dynamics, and cultural diversity (Järvelä et al., 2010). Barnett (2004), in describing the supercomplexity of higher education, argued that 'learning for an unknown future has to be a learning understood neither in terms of knowledge of skills but of human qualities and dispositions. Learning for an unknown future calls, in short, for an ontological turn' (p.247). What is more, the fathers of SIT (Johnson & Johnson, 1989a) also acknowledge that group work at university impacts students' psychological health, as well as their learning opportunities. Other theoretical perspectives, such as socio-cultural theory (Vygotsky, 1978) and social cognitive theory (Bandura, 1978), share a similar outlook. Early behaviourists also identified the manipulative power individuals have over each other in group situations (Skinner, 1953).

As noted in Chapter 3, a key process in the learning environment is students' '*interactions* between the personal and the contextual' (Biggs, 2003, p. 17). It includes interpersonal skills, and the emotional, intellectual and behavioural aspects of working together (Jaques & Salmon, 2007). In an early meta-analysis of studies that examined interdependence and interpersonal attraction among primary school students, Johnson, Johnson and Maruyama (1983) found that the cooperative nature of helping and supporting one other, being empathetic, and encouraging with peers, in a non-competitive environment, promoted greater interpersonal attraction, and ultimately, the more social and cooperative their experiences, the stronger the process of acceptance, regardless of heterogeneity. To improve the group work experience for accounting students at university and to enhance the development of teamwork and interpersonal skills, accounting educators must turn their attention to these affective learning outcomes.

In addition, an unexpected finding that helps to provide a holistic perspective on these results is that almost half of all student participants (46.4%) had previously deferred their university studies. This characteristic, which is consistent with national trends (DET, 2016b), infers broader life experiences, and an expected maturity in the affective learning domain (Martin, Wilson, Liem & Ginns, 2013), especially given that the majority of these

students indicated they had previously participated in post-secondary education. However, when considered in light of recent government statistics that suggests one-third of all deferred entry participants in Australian universities have previously attempted, but not completed, higher education studies (DET, 2016b), combined with the high percentage of international students participating in the current study (48.2%), which is also consistent with accounting schools nationally (Jackling, 2007), the results suggest a high degree of vulnerability would be experienced by many accounting students. Such exposure to potential performance and/or mastery fears, particularly in a group situation, requires careful support and understanding. Notably, a number of previous accounting studies have identified cultural background as a potential confounding variable to perceptions of generic skills and learning outcomes (Daly et al., 2015; Keneley & Jackling, 2011; Tempone et al., 2012), and others have found cultural links to a preference for group work (Hwang et al., 2005; 2008). However, prior experience related to deferred entry to university is rarely considered in the accounting group work literature, and the consequent potential for higher performance anxiety affecting group interdependence, has also been neglected. The profile of the accounting student in this study provides further justification for closer attention to affective learning outcomes.

10.7 Teaching teamwork skills: the second missing link

The second key missing link, identified in this study, is that teamwork skills are not being taught, nor do teaching staff monitor individual accountability within individual assessment tasks or contract type agreements incorporated into group work. In the first instance, unit outline archival data suggested that in general, information concerning group work activities was lacking and tended to include only a cursory mention that students would work in groups, with little or no reference to the development of teamwork skills. According to the student participants however, more often than not, group work is part of the accounting curriculum, but teamwork skills are not taught and nor are group work processes monitored. These perceptions were also confirmed by the academic participants. From the perspective of accounting academics, group work has positive and negative aspects for both students and staff, but in general these perspectives were framed within an assessment task outcome approach. The dilemma is in the lack of inputs. To use a car analogy, students are given a vehicle (group work) and a destination (the end task), but are not taught how to drive. In other cases, the ‘driving instructor’ or teacher may lack the necessary skills and knowledge themselves resulting in a confused array of

mixed messages, akin to some parents perpetuating their own bad habits when teaching their children to drive. It is feasible to expect therefore, that some students will cope better than others with the resultant challenges and uncertainty, but in all cases, personal qualities and values will underpin the success or otherwise of unfolding interactions. Clearly, this lack of taught skills is also likely to impinge on the affective state of individual students.

One explanation for the lack of teamwork skills being taught is presented in the model derived in Figure 7.5 (in section 7.3). Named the EeCH curriculum model of teamwork skills, it highlights the assumptions that are potentially fuelling the teamwork focus within the accounting curriculum. The academic participants in this study perceived teamwork skills to be either existing, internalised through experience, a commodity entwined in the end product, or something that relates more to future careers. However, closer interrogation of the staff demographic data suggests another plausible explanation is that the non-teaching of teamwork skills may be related to the lack of requisite skills and ability of accounting staff to implement such a program. The majority of the accounting academics interviewed (70%) did not hold any type of formal teaching qualification, and it was found that those without a formal qualification were more likely to use group work activities. In the same way that parents who are not driving instructors will nevertheless attempt to instruct their children, it follows that academics without formal teaching qualifications may not be aware of the limitations of their knowledge. Such a limitation may also influence an academic's choice to implement group work assignments as a perceived legitimate strategy to reduce marking workloads in large classes. Another explanation, which relates to the expectation that teamwork is the domain of the workplace, is that the working relationship between academics and accounting practitioners is not effective (Jones, 2017). Combined with differing conceptualisations of what teamwork means (Riebe et al., 2017), the result is that academics lack an understanding and appreciation of what aspects of interpersonal and teamwork skills need to be taught, to support and prepare graduates for entry into the professional world (Jones, 2017).

Clearly, accounting students need to be taught teamwork skills, and indeed the associated professional values, behaviours and attitudes. These skills and values are not developed by osmosis, nor can they be assumed to be inherent characteristics of students. Despite heavy teaching and administrative loads and research expectations, accounting

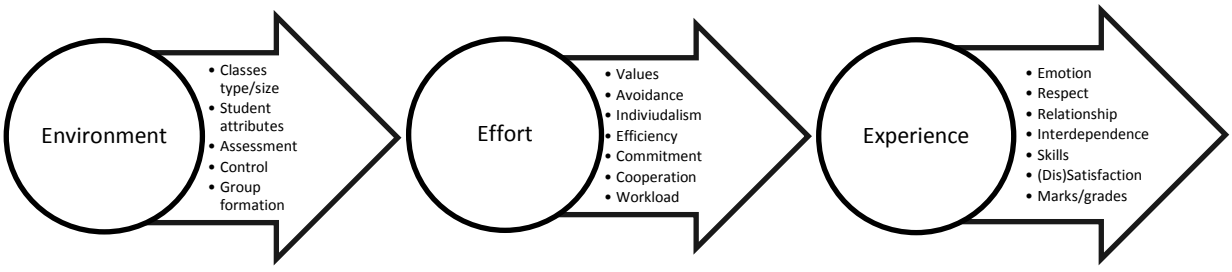
academics are also experiencing significant pressures to deliver desirable learning outcomes in relation to these skills and values (Cappelletto, 2010; Guthrie et al., 2014). This research therefore provides a timely warning for line managers and academic leadership teams to address this apparent inadequacy in the professional development of accounting academics.

10.8 The shared perspectives of students and academics

In combination, the findings of this study highlight important similarities between the perceptions and experiences of group work for both students and academics. Labelled the 3E model of group work themes, to reinforce the close alignment to Bigg's (2003) 3P model of teaching and learning, Figure 10.1 categorises each of the main themes described in this chapter into one of three areas: the environment (presage type factors); effort (process elements); and experience (the product or outcome of group work). Analysing the underlying constructs of both academics' and students' perceptions and experiences of group work, and the influence of various demographic variables, highlighted the importance of the teaching and learning environment. However, through this comprehensive investigation, the overall findings strongly signify the critical importance of behaviour, values, and attitudes (listed as effort in Figure 10.1), not only for skill development, and successful performance outcomes, but to provide the necessary conduit to positive experiences, mutual respect, understanding, and promotive interaction through interdependence. Notably, effort in this model comprises both cognitive and behavioural processes.

To better understand the rich tapestry of group work experiences for both teachers and learners, and how each of the abovementioned embedded themes interact, this study applied a theoretical framework based on Social Interdependence Theory (SIT), drawing

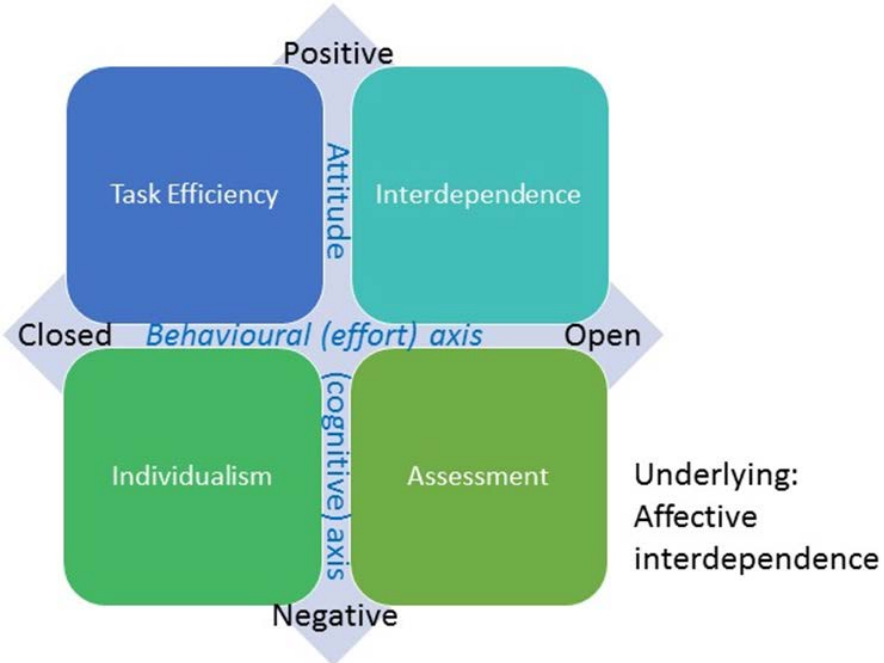
Figure 10.1 The 3E model of group work themes



extensively on the core assumptions of both socio-cognitive and socio-cultural perspectives as well, particularly in relation to the centrality of interdependence. Figure 10.2 demonstrates how the overall results can be integrated to form the interdependence matrix of group work experiences. The findings clearly show the underpinning nature of interdependence. Figure 3.4 (in section 3.5.1) focused on triangulating the key dimensions of group work, being the individual, the group, and the context, around the central and interconnecting theme of interdependence. The final results have confirmed these dimensions but more importantly uncovered how the three main types of interdependence, cognitive, behavioural, and affective interdependence (which denote thoughts, actions and feelings respectively), are recognised as the combined influences in all social interaction and relationships (Rusbult & Van Lange, 2003; 2008; Smith et al., 2014), including cooperative and collaborative learning situations (Jaques & Salmon, 2007; Johnson & Johnson, 2009).

Within the confines of the current study, academics' responses were dichotomised into positive and negative attitudes towards group work. For students, who also displayed positive and negative attitudes, their behavioural approaches were distinctly categorised as either open or closed approaches to group work. The three-dimensional Figure 10.2 firstly illustrates the intersection between attitudes (cognitive interdependence) shown on the Y axis, and approaches (behavioural interdependence) shown on the X axis. Secondly, four common key themes which represent the shared perspectives of students and staff

Figure 10.2 The interdependence matrix of group work



are overlaid in a two by two matrix. Individualism characterises the negative, closed approach to group work, while both staff and students who focused on how group work might reduce workloads had a more positive attitude about participating in group work activities but their actions represented a closed self-interest in achieving a means to an end with the least amount of effort. Not surprisingly, positive interdependence in the top right quadrant of the matrix is the pinnacle of collaborative learning encounters, while group assessment was most commonly viewed in negative terms by staff and students who were otherwise open to the opportunities for growth through embracing diversity and cooperation.

The third dimension in Figure 10.2 is portrayed as the partially obscured square located behind the matrix. It represents the underlying feelings and emotional effect of affective interdependence. As noted earlier, the key finding in this study is the underpinning nature of emotion and the importance of affective interdependence in facilitating collaborative learning environments in accounting education. Appropriately, this diagrammatical summary of the combined findings also presents an optical illusion where the background square that is the all-embracing affective component simultaneously appears as the arrows at each end of the behavioural and cognitive interdependence axes. It epitomises the complex and interrelated nature of the interdependence concepts and highlights the importance of perceptions. According to SIT, positive interdependence is defined as 'the perception that one is linked with others in a way so that one cannot succeed unless they do (and vice versa)' (Johnson & Johnson, 1989a, p. 24). Furthermore, prior research has found that perceptions of interdependence are more important than simply identifying with group membership or interpersonal interactions within a group (Johnson & Johnson, 2009).

10.9 Chapter summary

This chapter has discussed the key findings in this study, culminating with a succinct diagrammatical summary of the integrated results in Figure 10.2. The melding of the different types of interdependence shown in Figure 10.2, highlight the centrality of interdependence to these findings and more specifically to the group work environment. It also provides some insight into the importance of this study for its contribution to addressing the identified theoretical gap in the accounting education literature. Although interdependence has previously been mentioned as an important element of cooperative learning in accounting education, this study has contributed significantly to that body of

literature by answering the questions (among others) ‘what are the factors that contribute to the conceptions of group work in accounting?’ and ‘how is the theoretical concept of interdependence manifested in group work within accounting education in universities?’ The follow chapter will conclude this thesis by outlining further implications of these findings, the key contributions, limitations, and opportunities for future research.

Chapter 11: Conclusion

11.0 Introduction

This study examined the meaning of group work for accounting students and academics from a range of geographically and typologically diverse Australian universities. Five key research questions guided the establishment of a theoretical framework based on Johnson and Johnson's (1989a) Social Interdependence Theory (SIT), and the research methodology that integrated a mixed methods approach. This chapter now concludes the thesis. Following an overview of the accounting education context, a précis of the main aims and significance of the study, and a brief summary of the findings, the focus of this chapter will be the key implications for future research, policy development and most importantly, for improved learning and teaching practices, particularly in relation to desired teamwork learning outcomes in accounting and more broadly in higher education.

11.1 Overview of the background, aims and significance of the study

People skills have been identified as one of the key desired learning outcomes for all graduates in the Australian higher education sector (AQF, 2013; HESF, 2015). For accounting educators, and students seeking a career in accounting, the profession has also specifically endorsed that accounting graduates must attain competency in a mandated suite of skills that includes teamwork (Hancock et al., 2016). The International Accounting Education Standards Board (IAESB) also suggests that university accounting programs should focus on 'the development of non-professional knowledge, intellectual skills, personal skills, interpersonal and communication skills and organizational and management skills' (IES3, 2015, para 20). An increased emphasis on not only skills, but also values, ethics and attitudes (IES4, 2015), also recognises the growing demand and expectations of individual employers and employer groups (Jones, 2014; O'Connell et al., 2015). In this environment, group work, and the various conceptualisations of what it means and how it is used to develop and integrate people-based skills into the accounting curriculum, has become a subject of increasing importance.

Accounting education however, is generally perceived as deficient in its ability to develop appropriate interpersonal and teamwork skills in accounting students (Paguio & Jackling, 2016; Tempone et al., 2012). Although group dynamics and the cooperative learning literature have amassed a large following in the field of education (Johnson & Johnson, 2009), little of the theory and research is translated into everyday practice in

accounting units. Furthermore, despite the plethora of studies in generic skills, and the small number of innovative accounting educators implementing group-based initiatives and publishing their isolated experiences (as reviewed in Chapter 2), very little attention has been paid to the underlying reason for the ongoing criticism of accounting education in this area. In addition, while universities have been keen to document policies about generic skills and learning outcomes, the development and implementation of these policies has been left to teaching staff (Barrie, 2006), and universities have underestimated the significance of the difficulties faced by academics generally (Green et al., 2009). Accounting education is a prime example (Cappelletto, 2010).

Given the significance of people skills in the current regulatory and professional environment, and the paucity of comprehensive, cross-institutional, theoretically based, empirical research in relation to the attainment of these skills in accounting specifically (Apostolou et al., 2015), the present study was conceived to contribute to this important area of need.

The aim of this study was to explore the perceptions and experiences of group work for both accounting students and academics, drawing on the framework proposed by Social Interdependence Theory (SIT). It was conducted using a two-stage mixed method research design, and first examined the key underlying constructs for accounting students and their teachers. The stage two phenomenographic student interviews that followed focused in more depth on three key areas: students' initial thoughts about group work; what group work meant to them, specifically in relation to accounting; and their perceptions of future applicability.

11.2 Summary of findings

The explication of the overall findings in Chapter 10 highlights the significant contribution this study makes to further defining the underlying problems with group work in accounting. The overarching theme in the findings is affective interdependence, where emotions rather than simply task or goal approaches to interdependence, appears to be driving results. Overall, there are three main commonalities in the findings. The first is that students' reported underpinning feelings and emotions driven by a need for honesty, trust, understanding, acceptance and respect. Secondly, there is a common link to the lack of teamwork skills being explicitly taught in accounting units. Thirdly, a clear dichotomy exists between what is classified in Chapter 9 as open and closed approaches to group work participation, driven by the aforementioned affective aspects and the

practicalities and uncertainty relating to processes. Further analysis of these findings suggests that two key components, affective learning and the teaching of teamwork skills, are essentially missing from the repertoire in accounting education, and therefore are adversely impacting the quest to develop the required people skills, interpersonal, teamwork and group-based skill sets in accounting students.

11.3 Implications and key contributions

The extent and ways in which group work was used in the sample units examined in this study present clear challenges for the discipline of accounting. Specifically, the results suggest that employers' concerns about the lack of graduates' abilities to interact, communicate and work with others is justified (Jackling & De Lange, 2009; O'Connell et al., 2015; Paguio & Jackling, 2016; Tempone et al., 2012). It follows that if students are not being taught teamwork skills and are left to their own devices to make up work groups to simply complete an assessment task, with little or no guidance, the overall outcome is not unexpected. Furthermore, if students are assessed only on the end product of their group work encounters, or if teaching staff are not trained or provided with teamwork resources; and where no-one is claiming that unit learning outcomes include teamwork skills,it is clear that little will change to improve the status quo. The findings of this study are therefore significant in helping to address concerns raised by all stakeholders, and most importantly for improving the learning outcomes for students.

Specifically, this study not only contributes to the knowledge of how group work is used in Australian university accounting schools, but also the discovery of what group work means for accounting students, as presented in a unique three dimensional model of the various ways group work is experienced, provides important information on which to design practical solutions for accounting educators at a grass roots level. Before attempting to incorporate group work or team skills development into the accounting curriculum, the findings here suggest planning and urgent attention needs to be given to affective learning - helping students to appreciate and recognise personal and professional values, attitudes, ethics, integrity, and respect. The message from students was very clear. Underlying feelings affect their perceptions and experiences of group work. Likewise, academics suggested that the personal attributes and values of students, such as respect, tolerance, empathy, attitude, and a willingness to work together, were key to successful group work in accounting.

The implications of these findings are far-reaching. Supported by the seminal work of leading authors in learning and teaching fields (Baker et al., 2013; Bandura, 2012; Biggs, 2003; Duff & McKinstry, 2007; Johnson & Johnson, 2013; Krathwohl et al., 1964; Marton & Säljö, 1984; Prosser & Trigwell, 1999; Ramsden, 2003; Trigwell & Prosser, 1997), the findings imply that higher education, and accounting educators in particular, need to revisit Bloom's second domain of learning, as challenging a concept as that may be. Despite the many calls for affective learning to be given attention as a central element in higher education, it is acknowledged that it is 'notoriously difficult' to assess the achievement of affective learning outcomes (Shephard, 2008, p. 94). Nevertheless, there is substantial evidence in prior literature, and in the results of this current study, to make a renewed appeal for the implementation of affective objectives, similar to the taxonomy proposed over 50 years ago by Krathwohl et al. (1964).

11.3.1 Contributions to research and practice

In addition to the overarching key contributions mentioned above, this study also assisted in furthering research in accounting education in other significant ways, for both the university sector and initial professional development in practice. For example, this study has contributed to the accounting education literature with its broad sample population base. In accounting education, the authors of published articles are mostly devoted scholarly teachers, who report on the positive learning outcomes of their interventions, albeit isolated to one class at one point in time (Apostolou et al., 2015). It is rare to read self-reports from disgruntled teachers, of projects that have not taken account of learning theories, of poor pedagogical practices, and failing students, unless it is a commissioned report on some particular aspect of the discipline which tends to make broad-based recommendations related to overall generic skills or group work studies for a combination of disciplines. This study addressed this limitation in the literature and implemented a sampling plan that incorporated eight Australian universities initially, interviewed academics from six of those institutions, and provided an in-depth analysis at three geographically and typographically diverse institutions, using case study methodology.

A recurring constraint on accounting teachers continues to be the rapidly increasing student populations in accounting, and the rise in associated workloads. Therefore time- and resource-poor academics will also benefit from the outcomes of this study, which focuses on the more conventional iterations of group work in accounting. Furthermore, the sampling technique used was informed by 'maximum variation

(heterogeneity) sampling' (Patton, 2002, pp. 234-235); therefore the more heterogeneous the respondents, the more likely their ideas will be diverse and varied, and in turn represent the broader perspective of not only each case study site, but in this instance a broad cross-section of accounting students. The applicability of this study to graduate and professional programs is also apparent, especially where diverse candidates and/or student cohorts are thrust into similar group work situations to complete study modules (see for example CAANZ, 2017).

What is more, the initial observation of academic responses identified areas of agreement and more importantly aspects of group work that indicate a wide variance in experience, approaches, attitudes and overall perceptions. Accounting academics' perceptions of group work have not previously been investigated. Therefore, with a better understanding of the key factors that underpin both academics' and students' conceptions about group work, teaching staff, and indeed practitioner mentors, will also likely feel more empowered to focus on areas of greatest importance in the facilitation of collaborative learning in accounting. One small but effective change that would likely help to influence perceptions in this area is to promote the use of the term 'teamwork' rather than 'group work', thereby focusing on the learning outcome rather than mechanism. The focus on affective learning outcomes may well have a related consequence if educators also become more reflective and aware of the impact their own affective state might have on their teaching. Trigwell (2012), for example, found that university teachers who exhibit positive emotions tend to focus more on student learning, whereas those experiencing negative emotions about their teaching have a transmission type approach to teaching.

The research here has also provided additional evidence to alleviate other gaps in the literature and therefore assist in informing debate within the tertiary sector (and beyond), and particularly in the area of accounting education. Specifically the following original models were created during the execution of this project:

- A meta-analysis of group work articles published in accounting education journals (Table 2.1)
- Key dimensions identified in social learning and team-skills frameworks (Table 3.1)
- Comprehensive social interdependence theory diagram (Figure 3.3)
- Triangulating key dimensions of group work (Figure 3.4)

- Approaches undertaken to minimise threats to validity in the analysis of qualitative data (Table 4.6)
- Group work included in accounting unit outlines (Table 6.1)
- Academics' seven principal components for group work processes (Table 6.7)
- Summary of the most influential motivators for using group work in accounting (Table 6.8)
- Matrix of key themes in academics' perceptions of group work (Figure 7.2)
- The key elements of successful group work in accounting (Figure 7.3)
- The academics' control continuum of group work processes (Figure 7.4)
- The EeCH curriculum model of teamwork skills (Figure 7.5)
- Rotated factor matrix of accounting students' overall perceptions of group work (Table 8.5)
- EFA of students' perceptions of group work: a five factor solution (Table 8.15)
- Standardised score means ranking for the five group work factors (Table 8.17)
- Model of approaches to group work for students at CS1 (Figure 9.1)
- The group work double-edged sword model at CS2 (Figure 9.2)
- An achievement goal orientation model of group work at CS3 (Figure 9.3)
- Exemplars of what group work commitment means for students (Table 9.1)
- The outcome space of combined categories of description for student experiences of group work in accounting education (Table 9.3)
- The 3E model of group work themes (Figure 10.1)
- The interdependence matrix of group work (Figure 10.2)

This information will contribute to the enhancement of knowledge in a number of areas relating to the improvement of team-based learning outcomes, not only in accounting, but more broadly across other university disciplines, and in addition provides numerous opportunities for further research in these areas.

Another significant contribution made by this study is the detailed implementation of a full three-stage pilot study, which incorporated the failed first attempt at surveying students online. Although convention dictates that pilot testing is an important component of most research endeavours, textbooks offer minimal guidance and published reports provide very little to no detailed information about pre-tests or the results of pilot tests. In fact, few even mention the pre-test phase (Presser et al, 2004). Furthermore, there is

‘relatively little methodological research on pre-testing’ (Presser et al, 2004, p.109). Section 6.1.2 begins to alleviate this gap in the literature and highlights the reality of the educational research landscape. The terrain is uneven, obstacles and challenges are part of the process, and because it is not possible to eliminate all problems in a pre-test, this study described in detail how to use failed attempts to improve overall outcomes.

Finally, accounting departments and university managers will benefit from this research, as will professional bodies, government agencies, and industry participants who have long been wrestling with the issue of improving accounting education, specifically in relation to the acquisition of generic skills. Ultimately, the main beneficiaries (apart from students themselves) are the employers. Jones (2017) suggests that unresolved issues and criticisms of skill development continue to persist in accounting because research has tended to focus exclusively on either discrete skills or experiences of behaviour, values, and attitudes. He urges academics to become more purposefully engaged with practitioners in order to better understand that success in a professional career requires the integration of both skills and values. The in-depth nature of this study has exposed the same intimate relationship between skills and values, and therefore also makes an important contribution to closing the gap between research and practice, between academia and practitioners.

11.4 Further research

This study also contributes to the body of knowledge across a number of domains, such as accounting education, group dynamics, cooperative and collaborative learning literatures, as well as higher education policy and administration, in the opportunities it exposes for further research in these fields.

For each of the unique models listed above (in section 11.3.1), an opportunity exists to replicate and extend the various components of this study, to substantiate the findings and/or to further develop the survey instruments and approaches to improve the overall understanding of group work generally, and ultimately the learning outcomes, for not only accounting students, but tertiary and professional students generally. It would also be beneficial to conduct a similar study with a larger number of academics and different groups of students to validate these findings. Given the universal embrace of online learning environments, particularly with Massive Open Online Courses (MOOCs), flipped classrooms, blended learning options (Garrison & Vaughan, 2011) and distance/flexible modes of delivery, which are rapidly expanding into the field of

accounting education, the online context provides an important and rich resource for extending this work.

In addition, the outcomes of this study cradle aspirations of expanding this work into cross-disciplinary contexts, such as the education of other business/university graduates; industry and organisational behaviour; and/or psychology. Forsyth (2010) explains the interdisciplinary breadth that encompasses the field of group dynamics. He points out that its roots are firmly established in both sociological and psychological perspectives; therefore, numerous avenues exist to extend this work in cross-disciplinary contexts. It could be argued in fact, that to fully understand the implications of pursuing the affective learning pathway for group work in accounting, it will be imperative to elicit the expertise of colleagues from psychology.

From a global perspective, Australia is well represented on the world stage of accounting education research (Wilson, 2015), so it would be timely to extend this work in other countries as well, particularly given the international move to a learning outcomes focus and the continued shared emphasis on generic skills (AAA/AICPA, 2012; IAESB, 2016; OECD, 2015).

Since accounting education includes initial professional development (IPD) and continuing professional development (CPD), as well as general university education, further research opportunities to replicate and extend this study also exist with graduates in the professional space. Notably, the IAESB prescribes international education standards not only for professional skills (IES3), but also stipulate requirements for professional values, ethics, and attitudes in a specific standard of the same name, which includes associated learning outcomes (IES4, 2015). With the IAESB recently implementing a learning outcomes focus to international accounting education standards (IAESB, 2016), it is timely to explore prospective opportunities for further research in the skills and values fields. A rich source of related literature already exists in the area of accounting ethics, and this could also help expand this research. The findings of the current study and the methodologies used could inform seed projects in the interim, and foster collaborative research for larger projects with industry, the profession, and other institutions.

As mentioned, the affective learning frameworks (Krathwohl et al., 1964) also present exciting pathways to further the research instigated here. One associated area that has received some attention in the accounting education literature is emotional

intelligence (EI). In the past, EI in accounting has mainly focused on the failure of the discipline to develop EI in students (Abraham, 2006; Bay & McKeage, 2006; Cook, Bay, Visser, Myburgh & Njoroge, 2011; McPhail, 2004); and the shortfall found in the accounting profession's generic skills framework for the accreditation of university accounting courses in Australia (Daff, de Lange & Jackling, 2012). Daff et al. (2012) found that many aspects of EI such as self-confidence, emotional self-awareness, as well as social awareness components of empathy, organisational awareness, and developing bonds with others, were lacking emphasis in the Professional Accreditation Guidelines. The links between EI and the relationship and values constructs discussed in this study are worthy of further investigation, a pathway that has previously been suggested. For example, Druskat and Wolff (2001) submit that team research that focuses only on task processes, such as participation, cooperation, and goals, is omitting a crucial element, emotional intelligence (EI), that is 'the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought' (Mayer, Roberts & Barsade, 2008, p. 507).

Finally, Marton Deutsch, one of the founding fathers in cooperation, competition and conflict research, points out that to understand teamwork and cooperation, one needs to understand conflict since 'conflict is inevitable in teamwork; how the conflict is managed can lead either to the enhancement or disruption of cooperation and team productivity' (Deutsch, 2005, p. 1). Whether the objective of group work in accounting education is to develop and/or improve teamwork skills, processes and experiences, or whether the end point is purely task/product oriented, understanding conflict is essential, though rarely dealt with in the accounting education literature. How to manage conflict in the learning of values, professional attitudes and acknowledging affective interdependence is another perspective ripe for advancing knowledge in the accounting education arena and higher education generally, and intrinsically related to and extends this current work.

11.5 Limitations

Given the exploratory nature of this research and the use of multi-level nested sampling in a mixed methods design, there are inherent limitations that need to be acknowledged. Further, since this study was conducted by a single researcher, under supervision, statistical interpretation and analyst triangulation in the qualitative analyses was limited to supervisory processes. Table 4.6 (see section 4.7.1) provides a list of the strategies

undertaken in this study to minimise potential threats to validity, particularly in the analysis of the qualitative data. Nevertheless, the following limitations should be noted when considering the results of this study.

Initially it needs to be recognised that the purposive sampling strategy, employed throughout this study, means that the results are not generalisable to the wider population. For example, the original 90 unit outlines that were the catalyst for determining the sample for this project, were sourced mainly from institutions who made them publicly available on their websites. Although all available outlines were analysed, it is feasible that an implicit bias exists, especially as only seven of 39 accounting schools choose to put their outlines online in the year of the investigation. An additional non-disclosing university was used to control for possible biases; however, this remains only a fraction of the accounting units offered in Australia. It is also noted that the internal validity of information supplied in unit outlines may be impacted if information contained within them is incomplete, not followed completely, or subsequently changed during delivery of a unit. As mentioned earlier, unit outlines also present a limitation where details of assessment criteria are missing. An additional limitation is that the content of units of study is time sensitive. Given the size of this project, a number of years have passed since information was first collected from unit outlines. During that time it is likely that various aspects of the unit or course may have changed, although the fact that all the analysed units are subject to professional accreditation guidelines provides some assurance that overall the course would remain similar or have similar learning outcomes across the course. These results are also limited to only the face-to-face mode of delivery as the study was confined to on-campus programs. Many accounting courses also offer online/distance mode options for students; however, online group work presents additional challenges and calls for a different learning design and a different research design (Jaques & Salmon, 2007).

In relation to surveys, responses can be subject to non-response bias or mode effects (de Vaus, 2002), and although the benefits offered by implementing a multi-mode strategy of administration outweighed the limitations, and strategies were implemented to minimise the effects of non-response bias, some potential weaknesses remain. For example, unlike the face-to-face situation, telephone interviews have to rely on ‘respondents retaining all the spoken information in the question’ (de Vaus, 2002, p. 113), and this places real limits on response categories and the way questions are posed. There

are also no visual cues on which to draw. Nevertheless, one way of dealing with retention issues is to describe the rating scale in terms of a numerical scale (de Vaus, 2002). In this study, the academic participants would also be familiar with Likert scales and survey structures, thereby minimising possible threats from this limitation. It is also acknowledged that the overall length of the survey for both academics and students may have impeded responses in some way.

Dillman's (2000) definition of the error caused by non-respondents has two critical components (besides the simple calculation of response rate). Respondents and non-respondents must have different characteristics and those characteristics must be important to the study. Furthermore, as noted by Sax et al. (2003), with an 'increasingly fast-paced culture and the growing demands on students' time, undergraduates simply may be less willing to commit themselves to a voluntary activity such as completing a survey' (p. 423) . Spitzmüller et al. (2006) also point out that previously used techniques to increase response rates may no longer be effective with new types of non-respondents. In this digital age, this limitation and potential missing cohort must also be acknowledged.

Interviewing a large international student contingent in accounting cohorts also posed some challenges for the interviewer when limited English language skills would cause students to ask for the meaning of a word. While every effort was made not to lead the respondents, and to rephrase using carefully chosen descriptors, interviewing highlighted the potential limitations faced by ESL students comprehending all items in the self-administered questionnaire, and where the opportunity to ask for clarification may have been stifled by feelings of vulnerability within the classroom situation. All students were very aware of the voluntary nature of their participation, and their right not to answer or to withdraw from completing the survey at any time. However, this does not negate the limitation of incorrect answers being provided, a noted limitation for all survey research, not just for respondents with limited language abilities.

11.6 Conclusion

Group membership is 'inevitable and universal' (Johnson & Johnson, 2013, p. 2). People skills, which include the ability to effectively interact, communicate, adapt and engage with the complexities of ever-changing environments, those in which members of a group operate, are critical for the success and advancement of whatever endeavours and goals are pursued. It is for this reason that the significance of group work and the development of interpersonal skills for individual students continue to attract prominence in all sectors,

government, higher education, organisations, professions, and industries, locally, nationally, and globally.

For accounting education specifically, this research has highlighted that despite the continued emphasis on generic skills, such as people skills, rather than purely technical proficiencies, evidence suggests that accounting education continues to fall short on achieving learning outcomes in these 'soft skills' areas, particularly with teamwork and interpersonal skills. This study was therefore motivated to address this issue by specifically focusing on five research questions that explored the conceptions, attitudes, experiences and personal characteristics of individual students and their teachers, in relation to group work at university. With a better understanding of the variation in these conceptions, we can begin to address the underlying issues.

The findings of this study confirms that despite group work being used extensively in university accounting courses, teamwork skills are not taught or assessed. At the 'coal-face', unit coordinators and other teaching staff are being expected to drive innovation and change (Vilkinas, 2009). However, for accounting academics, the need to facilitate additional challenges posed by changing business environments, regulations, globalisation, internationalisation, competition, technological advances, an unrelenting and compounding growth in the number and diversity of students, and the corresponding resource issues, have adversely impacted on the capability of accounting educators to implement innovative and effective change in respect of curriculum and pedagogy, particularly in relation to the development of generic skills such as teamwork skills. This situation is exacerbated by the finding that many accounting educators do not have formal teaching qualifications. There was also a significant relationship between those using group work and those without teaching qualifications. Clearly, university administrators and leaders in the accounting and academic development disciplines must take the training, support, and professional development of their teaching staff more seriously. Although professional development is no doubt provided, there needs to be a cultural change in how that support is implemented, with more emphasis on providing strategies for teaching group work skills to students. Change is critical in order to fully equip and empower academics to deliver the quality product promised to students in all the glossy brochures and dazzling web pages.

For students, six qualitatively different ways of experiencing group work were derived from the data, and subsequently grouped into two key domains: closed

individualistic approaches to group work, and open interdependent approaches. Overall however, an overarching affective concept of connectedness and the need for respect, dominated across all variations. Significantly, affective learning and the need to embrace physiological health and the emotional aspects of working together is strongly supported in the literature. What is more, international accounting education standards stipulate that professional competence comprises the integration of three key aspects: technical competence; professional skills; and professional values, ethics, and attitudes (IAESB, 2015a). Therefore, given the objective of accounting education is to adequately prepare accounting graduates to become effective professionals, and the coalescence of these three components is integral to providing a strong foundation to better equip our students to achieve that aim, then supported by the findings of this study, and prior literature, accounting education needs to embrace the inclusion of affective learning outcomes and focus more on the teaching of values and attitudes, in addition to the technical and skills based focus. This translates to affective interdependence being the central and key component in facilitating collaborative learning in accounting education. In turn, teamwork skills, interpersonal skills, and effective group work will be better enabled, and both academics and students will experience the full benefit of collaborative learning.

Appendices

Appendix 1a AQF qualification type learning outcomes descriptors for Bachelor Degrees

<table>
<tr><th>Knowledge:</th><th>Skills:</th></tr>
<tr><td>Graduates of a Bachelor Degree will have a broad and coherent body of knowledge, with depth in the underlying principles and concepts in one or more disciplines as a basis for independent lifelong learning</td><td>Graduates of a Bachelor Degree will have:
• cognitive skills to review critically, analyse, consolidate and synthesise knowledge
• cognitive and technical skills to demonstrate a broad understanding of knowledge with depth in some areas
• cognitive and creative skills to exercise critical thinking and judgement in identifying and solving problems with intellectual independence
• communication skills to present a clear, coherent and independent exposition of knowledge and ideas</td></tr>
<tr><td colspan="2">Application of knowledge and skills:</td></tr>
<tr><td colspan="2">Graduates of a Bachelor Degree will demonstrate the application of knowledge and skills:

• with initiative and judgement in planning, problem solving and decision making in professional practice and/or scholarship
• to adapt knowledge and skills in diverse contexts
• with responsibility and accountability for own learning and professional practice and in collaboration with others within broad parameters</td></tr>
<tr><td colspan="2">Source: AQF (2013, p.16) [emphasis added]</td></tr>
</table>

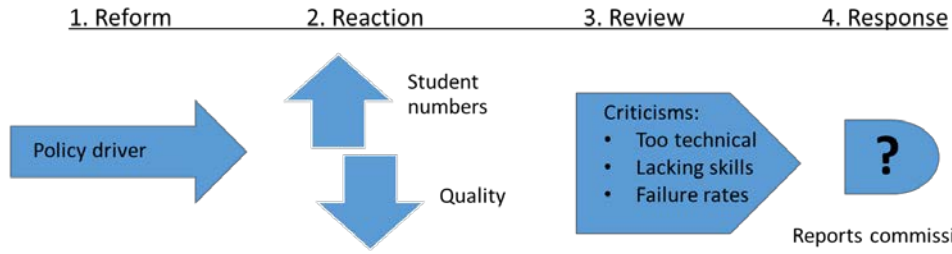
Appendix 1b Accounting professional bodies accreditation guidelines for accounting programs in Australia: 2009-2015 amendments

2015 Professional skills: *IES 3: Professional skills*	**Accepted Equivalency** *Threshold learning outcomes*	**2017** *Revised standards*	**2012** *Accounting academic standards*	**2008/2009** *Generic skills*
Intellectual skills	Application skills	Critical analysis and problem solving skills	Application skills	Analytic skills
Technical & functional skills	Knowledge	Knowledge	Knowledge	Routine skills
Personal skills	Self-management	Self-management	Self-management	Personal skills
Organisational & business management skills	Judgement	Judgement	Judgement	Appreciative skills
Interpersonal & communication skills	Communication and teamwork	Communication	Communication and teamwork	Interpersonal skills
		Teamwork		Interpersonal skills
2015 Competency areas:	**CPA Australia**	**Chartered Accountants ANZ**	**Knowledge areas: CPA/ICAA[1]**	**Core Curriculum areas:**
Accounting systems and processes**	Yes	Yes	Yes/Yes	*Part of Financial Acc.*
Financial accounting and reporting*	Yes	Yes	Financial accounting:Yes/Yes	Financial accounting
Audit and assurance	No	Yes	No/Yes	No/Yes
Business law**	Yes	Yes	-	-
Commercial law***	-	-	Yes/Yes	Yes/Yes
Corporations law***	-	-	Yes/Yes	Yes/Yes
Economics **	Yes	Yes	Yes/Yes	Yes/No
Finance and financial management*	Yes	Yes	Finance: Yes/Yes	Finance
Management accounting	Yes	Yes	Yes/Yes	Yes/Yes
Quantitative methods**	Yes	Yes	Yes/Yes	Yes/No
Taxation	No	Yes	No/Yes	No/Yes
Accounting information systems**	No	No	Yes/Yes	IS design & development Yes/No
Accounting theory**	No	No	Yes/Yes	-
Information technology *across the curriculum*	Yes	Yes	-	-
Ethics *across the curriculum*	Yes	Yes	Yes/Yes	Yes/Yes

[1] In 2014 the Institute of Charactered Accountants Australia (ICAA) merged with the New Zealand Institute of Chartered Accountants to become Chartered Accountants Australia New Zealand (CAANZ).
* Change of name.
** Change in requirements; subject new, combined, removed from the list, or changes implemented by only one body.
*** In 2008/2009, CPA Australia accepted an equivalent local law unit for students overseas.

Adapted from: CPA and CAANZ (2015); CPA and ICAA (2012); ICAA and CPA (2008; 2009)

Appendix 1c Chronology of events influencing accounting education in Australia



1. 1944: CRST (gov)	yes	yes	Murray (1958)/ Martin (1964)
2. 1964: Degree entry (prof)	yes	yes	Vatter (1964)
3. 1967: CAEs (gov)	yes	yes	Task Force for AE in Aust. (1988)
4. 1988: Dawkin's UNS (gov)	yes	yes	Birkett (1989); Mathews (1990)
5. 2000s: MPA (prof)	yes	yes	Mayer (1992);Neilson (2000);ACER (2001)
6. 2004: MODL (gov)	yes	yes	Bradley (2008);DEEWR (2009);Baird (2010)
7. 2011: TESQA (gov)	yes but improve quality	yes	Hancock et al (2010); TEQSA (2012)
8. 2013: AQF (gov)	Learning outcomes	yes	O'Connell et al (2015); Hancock et al (2016)
9. 2015: Higher Education Act (gov)	Learning outcomes	yes	

Key:

1. CRST = Commonwealth Reconstruction Training Scheme
3. CAEs = Colleges of Advanced Education
4. UNS = Unified National System
5. MPA = Master of Professional Accounting (courses)
6. MODL = Migration Occupations in Demand List (for Australia)
7. TEQSA = Tertiary Education Quality and Standards Agency
8. AQF = Australian Qualifications Framework

Appendix 2 Content analysis decision rules for coding unit outlines

- Subjects are categorised according to the knowledge areas required under CA/CPA accreditation (ICAA & CPA, 2009);
- Year level is determined by reference to the unit's numerical code, since some universities have trimesters and fast-track degrees completed in two calendar years;
- Where the type and weighting of group work includes an individual component, this should be recorded;
- Group work includes any reference to team work or team skills. It also includes both assessable and non-assessable items; assessable and non-assessable items should be clearly delineated;
- Graduate attribute reference includes only the separate listing of team work or group work skills in a section dedicated to the institutional generic graduate attributes, and/or specific learning outcomes related to generic team skills;
- Only face-to-face; local (domestic) units; ignore any distance offerings of units;
- Accounting units include all compulsory accounting units listed as part of the accounting major course of study, including compulsory minor units that form part of the accredited accounting course – *except:* economics, quantitative methods, or management[75]. Unit inclusion should be determined by reference to the unit's discipline prefix in the numerical code;
- Where the subject name is not clear, categorisation should be determined by reference to the unit's description and content pages;
- The following types of units are explicitly excluded from analysis:
    - CSCL (i.e. Distance units) – *except* for common use of commercial Learning Management Systems (LMS) eg. Blackboard/Moodle
    - Summer/Spring school units (except for trimester units)
    - Voluntary student study groups or peer assisted learning groups
    - Elective units (only compulsory accounting units)
    - Honours units; MPA & other postgraduate courses (only undergraduate)

[75] Economics and management units have been excluded for the purposes of this study, as they commonly fall exclusively under the jurisdiction of disciplines other than accounting (eg. Economics and Management disciplines, respectively). Teaching responsibilities are similarly undertaken by academics in these other disciplines.

Appendix 3 Email 1 – Unit outline request

To: All HOS, Accounting Schools
From: Bernadette Smith
Subject: Unit/Course Outlines for Research

Dear <HOS> (cc school secretary),

I write to ask for permission to access your student subject outlines for the purposes of my PhD study.

As part of my PhD research which looks at the effectiveness of group work in accounting education, I am collecting preliminary data from unit/course/subject outlines. The main purpose of this exercise is to examine the extent to which group work is used in accounting courses offered at Australian universities.

Following this I will select a sample group of 3 (or possibly 4) courses and invite a number of academics and students to participate in the full study.

As one of seven accounting schools (at Australian universities) who have course outline information publicly available on their website, I invite your school to participate in this first exploratory stage by providing copies and /or permission to access the following for all subjects in your undergraduate accounting major:

Semester 1 & 2, 2009	Undergraduate	Unit/Course outlines
Semester 1 & 2, 2010 (as they become available)	Undergraduate	Unit/Course outlines

A reply email to the sender confirming that the subject outlines prepared and handed to students at the beginning of each semester are indeed available on your website and verification of the relevant URL where they can be found is all that is required.

Your involvement in this study is voluntary and while I would be pleased to have you participate, I respect your right to decline.

All information will be treated in a confidential manner, and your names and/or those of your courses will not be used in any publication arising out of the research without your express consent. One possible benefit of participation is that I hope to pursue related joint research opportunities with colleagues at other institutions at a later date.

If you would like to discuss any aspect of this study please feel free to contact me or one of my supervisors (as listed below). If you wish to take part in this stage of the study the receipt of your course outlines and/or permission to access them online will imply consent.

Thank you for taking the time to consider my request.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Yours sincerely,

Bernadette Smith

PhD Candidate
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Fax. 07 36237546
Mobile
Email: Yoni.Ryan@acu.edu.au

Appendix 4 Email 2 – PVC access permission

To: PVC Teaching and Learning
CC: HOS, Accounting
From: Bernadette Smith
Subject: Research Access

Dear <PVC T&L>,

I write to ask for permission to access accounting academics and students at your university for the purposes of my PhD study at the University of Tasmania. The overall aim of the project is to investigate the effectiveness of group work in accounting education.

The attached memo provides a general overview of my proposed research.

If you would like to discuss any aspect of this study further please feel free to contact me or one of my supervisors (as listed below).

Thank you for taking the time to consider my request.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Yours sincerely,

Bernadette Smith

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Appendix 4.1 Memo attachment to email 2 – PVC access permission

<Date>

Professor <Name>
<Position>
<University>
<Address>

Dear Professor <Name>

Thank you for your interest in this study. As noted briefly in the accompanying email, I write to you (and your Head of School in Accounting) to seek permission to survey and/or interview accounting academics and students at your university.

As part of my PhD research, which looks at the effectiveness of group work in accounting education, I am collecting preliminary data from unit/course/subject outlines. As one of seven accounting schools (at Australian universities) who have course outline information publicly available on their website, I invited the Accounting School at your university to participate in the exploratory stage of the study by granting permission to firstly access all subject outlines in the undergraduate accounting major and subsequently to interview selected staff members about their perceptions and experiences of group work. I believe their input will provide invaluable data to give perspective and frame the direction for a more in-depth analysis of students' understanding of their learning within group work environments.

Following this I will select a sample group of 3 (or possibly 4) courses (at different universities) and invite a number of academics and students to participate in the full study. The full study will involve students enrolled in the sample courses (subjects) being invited to complete an in-class survey and to indicate their willingness to participate further in phenomenographic interviews. My aim is to interview approximately 6-8 students from each of the sample groups.

Following research protocols, all information will be treated in a confidential manner. One possible benefit of participation for your staff is that I will provide feedback to the participating lecturers relating to data collected from their students and in addition hope to pursue related joint research opportunities in the future.

For your students it provides them with the opportunity to share their experiences of group work and their responses will help improve our understanding of how students engage with group work. Ultimately our aim is to enhance learning outcomes for all accounting students and hopefully for students generally.

Background information about the study
Group work has taken on greater significance in higher education in recent times. There appear to be 3 main drivers:

1. Employer demand: the increasing emphasis on generic skills such as interpersonal, communication and critical thinking skills;
2. The changing face of higher education: greater diversity and numbers of students;
3. The extant literature: it is well documented that collaborative learning enhances critical thinking and interpersonal skills.

However, there appear to be different conceptualisations of what it all means in the context of teaching and learning and how such skill development can be integrated into the curriculum (Barrie, 2007). This is especially so for accounting education where there has traditionally been a greater emphasis on technical skills. The very mention of having to work with others at university often brings moans of discontent from students and continues to present challenges for students and staff in a number of areas. Furthermore, the cognitive processes associated with learning in groups and the development of group work skills, particularly in accounting education, is not well understood.

Purpose of the study
The overall purpose of the study is to examine the meaning of 'group work' for accounting students and their teachers. It will aim to address the lack of empirical evidence regarding the acquisition and transferability of knowledge within a group environment and the processes involved in the development

of group work skills. Communication, critical thinking and interpersonal skills – 'working with others'─ tend to dominate generic skills inventories and frameworks across sectors and around the world (ACER, 2001; Barrie, 2009). Importantly, the growing emphasis on ethical, social and global perspectives, on international students having the opportunity to practice English language communication skills, on life-long learning, and adapting to changing environments, is also grounded firmly in the ability to communicate, respect, respond, and interact with others. Clearly, these represent core learning outcomes for the 21st century graduate entering a global market.

If you would like to discuss any aspect of this study further please feel free to contact me or one of my supervisors (as listed below).

Ethics approval

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Thank you for taking the time to read this memo and consider my request.

I look forward to your response with anticipation.

Yours sincerely,

(Mrs) Bernadette Smith

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Appendix 5 Email 3 – Academic invitation

To: Unit Coordinators
From: Bernadette Smith
Subject: Group Work Interview
Attach: Information sheet; Consent form

Dear <Unit Coordinator> ,

I am writing to invite you to participate in a telephone interview to survey your use, perceptions and experiences of group work in your teaching of accounting at university. This interview forms part of my PhD research which looks at the effectiveness of group work in accounting education.

The interview consists of both structured and open ended questions and should only take around 20 to 30 minutes of your time. Further information about the study and a formal consent form is attached to this email.

If you agree to participate, please complete and sign the attached consent form. A scanned electronic format attached to a reply email is acceptable. Alternatively you may fax a copy to me. Please let me know if you would prefer to be sent a hard copy of the information and consent form together with a reply-paid envelope. I will contact you by phone in another 3 to 5 days to arrange a mutually convenient time to conduct the interview. If you prefer you may wish to advise (by return email) of the most convenient time for me to call you.

As always, your involvement in this study is voluntary and while I would be pleased to have you participate, I respect your right to decline.

Thank you for taking the time to consider my request.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Yours sincerely,

Bernadette

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SCHOOL OF ACCOUNTING & CORPORATE GOVERNANCE

PARTICIPANT INFORMATION SHEET
Academic Telephone Interview
Facilitating collaborative learning in accounting students

Thank you for your interest in this study. The following information outlines my overall PhD research study and how this stage of the process, which involves interviewing selected accounting academics, is a vitally important component. I believe that your input will provide invaluable data to give perspective and frame the direction for a more in-depth analysis of students' understanding of their learning within group work environments.

Since I have already searched unit/course/subject outlines available online, the main purpose of this exercise is to gather additional information as part of the initial exploratory stage of the overall study. You have been invited to participate in a telephone interview as one of 12 academics whom I have selected from accounting courses offered at 6 different Australian universities. The telephone interview consists of both structured and open ended questions and should take around 20 to 30 minutes to complete. Through this process I hope to gain some insight into your perceptions and experiences of group work and the extent and types of group work you use.

Your involvement will also aid the selection process to identify a broad cross section of accounting courses that use or do not use group work (as the case may be). Following this I will select a sample group of 3 (or possibly 4) courses and invite a number of academics and their students to participate further in the study.

Background
Group work has taken on greater significance in higher education in recent times. There appear to be 3 main drivers:

1. Employer demand: the increasing emphasis on generic skills such as interpersonal, communication and critical thinking skills;
2. The changing face of higher education: greater diversity and numbers of students;
3. The extant literature: it is well documented that collaborative learning enhances critical thinking and interpersonal skills.

However, there appear to be different conceptualisations of what it all means in the context of teaching and learning and how such skill development can be integrated into the curriculum (Barrie, 2007). This is especially so for accounting education where there has traditionally been a greater emphasis on technical skills. The very mention of having to work with others at university often brings moans of discontent from students and continues to present challenges for students and staff in a number of areas. Furthermore, the cognitive processes associated with learning in groups and the development of group work skills, particularly in accounting education, are not well understood.

Purpose of the study
The overall purpose of the study is to examine the meaning of 'group work' for accounting students and their teachers. It will aim to address the lack of empirical evidence regarding the acquisition and transferability of knowledge within a group environment and the processes involved in the development of group work skills. Communication, critical thinking and interpersonal skills – 'working with others'─ tend to dominate generic skills inventories and frameworks across sectors and around the world (ACER, 2001; Barrie, 2009). Importantly, the growing emphasis on ethical, social and global perspectives, on international students having the opportunity to practice English language communication skills, on life-long learning, and adapting to changing environments, is also grounded firmly in the ability to communicate, respect, respond, and interact with others. Clearly, these represent core learning outcomes for the 21st century graduate entering a global market.

Confidentiality
All information will be treated in a confidential manner, and your name and/or those of your courses will not be used in any publication arising out of the research without your express written consent (for example, in the event of any joint publications in the future).

Your responses to the telephone interview questions will be simultaneously noted by the researcher and recorded on audiotape to be later transcribed to written text. Interview transcripts will include only pseudonyms in place of participant and third party names, or any other identifying information. If you wish you will have the opportunity to view the transcribed interviews to elaborate or make corrections. At the interview you will be invited to indicate your willingness to participate further in this study. Further participation will involve ongoing discussions and the coordination of access to your students for the purposes of the case study stage of the project. However I will always be happy to receive any additional feedback from you.

Data obtained from this research will be securely stored at the University and destroyed five years after publication of the thesis.

Risks and Benefits
Your involvement in this study is completely voluntary and your willingness to participate evidenced by signing and returning the attached consent form. There are no specific risks anticipated with participation in this study. However, you are free to withdraw from the interview and/or study at any time, without consequence, and to withdraw permission to use any information provided by you, provided that you do so before the thesis is completed.

Due to the reflective nature of interviews, one possible benefit of participation is that the questions asked may influence the way you think about group work in the future. In addition, I will be selecting 3 or 4 accounting courses as my case study subjects. If you agree to be involved beyond this initial interview and your course meets the case study criteria, I envisage a number of opportunities for future collaborative research projects and hope to pursue related joint publications with colleagues at other institutions at a later date.

If you would like to discuss any aspect of this study further please feel free to contact me or one of my supervisors (as listed below).

Ethics approval
This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Thank you for taking the time to read this information sheet and consider my request.

CONTACTS:

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References

ACER (2001). Employability skills for Australian industry: Literature Review and Framework Development, Report to: Business Council of Australia Australian Chamber of Commerce and Industry. Australian Council for Educational Research. Canberra, DEST. Retrieved 2 July 2009 from: http://www.dest.gov.au/NR/rdonlyres/FDD9BFD1-F678-4EA6-AAD6-71F135E002CC/2213/literature_research.pdf.

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SCHOOL OF ACCOUNTING & CORPORATE GOVERNANCE

CONSENT TO PARTICIPATE IN RESEARCH

Academic Telephone Interview
Facilitating collaborative learning in accounting students

1. I have read and understood the 'Information Sheet' for this study.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves:
    a. Scheduling a mutually convenient time to conduct the interview;
    b. Completing a telephone interview that will take approximately thirty minutes;
    c. The opportunity to elaborate or correct transcribed interviews;
    d. Only if I choose - volunteering for further participation; discussions and the coordination of access to my students for the purpose of case study research

4. I understand that my participation in this study is voluntary. I understand that I am free to refuse to answer any particular question and can withdraw from the study at any time without prejudice. The freedom to withdraw from the study also includes the right to withdraw any data contributed by me subject to the time restriction imposed by the completion of the thesis.

5. I understand that all research data will be securely stored on the University of Tasmania premises for five years following the publication of the PhD and then destroyed.

6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant. I reserve the right to revoke this clause in the case where I may be invited to co-author a paper that may identify my involvement.

8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researchers will be used only for the purposes of the research.

9. I agree to participate in this telephone interview and understand that I may withdraw at any time without any effect, and if I so wish may request that any data I have supplied be withdrawn from the research.

Name of participant:_____

Signature of participant: _____ **Date:** _____

Statement by Investigator

☐ I have explained the project and the implications of participation in it to this participant and I believe that the consent is informed and that he/she understands the implications of participation.
OR
☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this study.

Name of investigator: Bernadette Smith

Signature of investigator: _____ **Date:** _____

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [H11127].

Appendix 5.2 Email 4 – Follow up Academic invitation

EMAIL 4
To: Unit Coordinator (Non-respondents)
From: Bernadette Smith
Subject: Group Work Interview
Attach: Information sheet; Consent form

Dear <Unit Coordinator> ,

As part of my PhD research which looks at the effectiveness of group work in accounting education, I recently emailed you an invitation to participate in a telephone interview.

If you have already responded please accept my sincere thanks. If not, I would be very grateful to hear from you as I have only sent this invitation to a small representative sample and your input is most important. If by chance you have misplaced my original email I have attached an information sheet together with a consent form should you decide to participate.

If you have any questions regarding the study please do not hesitate to contact me.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Yours sincerely,

Bernadette

Bernadette Smith
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University of Tasmania
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Tel: (03) 6226 2282
Fax: (03) 6226 7845
Email: B.N.Smith@utas.edu.au

Appendix 6 Email 5 – Case study selection notification

To: Unit Coordinator (Selected for Case Studies)
From: Bernadette Smith
Subject: Groupwork Study
Attach: Information sheet; Consent form

Dear <Unit Coordinator> ,

Thank you for your continued support of my PhD research into group work in accounting education.

I am pleased to advise that you and your class have been selected to participate in the full study.

This will involve students completing a questionnaire at the beginning of semester 2 followed by in-depth interviews with a small sample of the student cohort. I may need to consult with you during that selection process to ensure a diverse but representative sample. Following the data analysis I will return to discuss the results with you and gather your thoughts about the findings and possible implications.

In the meantime I will be contacting the appropriate personnel at your university to organise the necessary approvals to conduct the study.

I look forward to working with you on this project. If you have any other questions regarding the study please do not hesitate to contact me. I will be in touch again soon.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Best regards

Bernadette

Bernadette Smith
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Email: B.N.Smith@utas.edu.au

Appendix 6.1 Email 6 – Case study selection unsuccessful

To: Unit Coordinator (Not required)
From: Bernadette Smith
Subject: Groupwork Study

Dear <Unit Coordinator> ,

Thank you for your continued support of my PhD research into group work in accounting education.

With the generous assistance of yourself and colleagues surveyed at other universities I have now been able to group together similar approaches to group work. Unfortunately, due to time and resource constraints I will not be able to interview all student cohorts.

On this occasion, therefore, I will not require access to your students for the purpose of my study.

However, I look forward to pursuing other opportunities to work together in the future (post doc!).

On a personal note, I would like to add that your passion for teaching and the pursuit of excellence has been inspirational to me. Keep up the good work!

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Best regards

Bernadette

Bernadette Smith
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Appendix 7 In-class survey information sheet & PowerPoint slides

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Email: Bernadette.Smith@utas.edu.au

SCHOOL OF ACCOUNTING & CORPORATE GOVERNANCE

PARTICIPANT INFORMATION SHEET
Student Group Work Questionnaire
Facilitating collaborative learning in accounting students

Thank you for your participation in this study.

The following information outlines my overall PhD research study and how this stage of the process, which involves surveying students' perceptions and experiences of group work is a vitally important component. I believe that your input will provide invaluable data to give perspective and frame the direction for a more in-depth analysis of students' understanding of learning within group work environments.

The main purpose of this exercise is to gather information from students within the same class/learning environment to ensure we capture as many different perspectives as we can and account for the great diversity of views, perceptions and experiences. You have been invited to participate in this online survey as one of the students from <subject code and name> (semester 1). To account for differences in other places I will also be repeating this survey at two other Australian universities.

Following this I will invite a number of students to participate further in a more in-depth analysis through personal interviews.

Background
Group work has taken on greater significance in higher education in recent times. There appear to be 3 main drivers:

1. Employer demand: the increasing emphasis on generic skills such as interpersonal, communication and critical thinking skills;
2. The changing face of higher education: greater diversity and numbers of students;
3. The extant literature: it is well documented that collaborative learning enhances critical thinking and interpersonal skills.

However, there appear to be different conceptualisations of what it all means in the context of teaching and learning and how such skill development can be integrated into the curriculum (Barrie, 2007). This is especially so for accounting education where there has traditionally been a greater emphasis on technical skills. The very mention of having to work with others at university often brings moans of discontent from students and continues to present challenges for students and staff in a number of areas. Furthermore, the cognitive processes associated with learning in groups and the development of group work skills, particularly in accounting education, is not well understood.

Purpose of the study
The overall purpose of the study is to examine the meaning of 'group work' for accounting students and their teachers. It will aim to address the lack of empirical evidence regarding the acquisition and transferability of knowledge within a group environment and the processes involved in the development of group work skills. Communication, critical thinking and interpersonal skills – 'working with others'─ tend to dominate generic skills inventories and frameworks across sectors and around the world (ACER, 2001; Barrie, 2009). Importantly, the growing emphasis on ethical, social and global perspectives, on international students having the opportunity to practice English language communication skills, on life-long learning, and adapting to changing environments, is also grounded firmly in the ability to communicate, respect, respond, and interact with others. Clearly, these represent core learning outcomes for the 21st century graduate entering a global market.

Confidentiality
All information will be treated in a confidential manner, and your name and/or those of your courses will not be used in any publication arising out of the research.

Your responses to the interview questions will be recorded on audiotape to be later transcribed to written text. Interview transcripts will include only pseudonyms in place of participant and third party names, or any other identifying information. If you wish you will have the opportunity to view the transcribed interviews to elaborate or make corrections.

Data obtained from this research will be securely stored at the University and destroyed five years after publication of the thesis.

Risks and Benefits
Your involvement in this study is completely voluntary and you are free to withdraw from the interview at any time, without consequence, and to withdraw permission to use any information provided by you, provided that you do so before the thesis is completed.

While the information you provide will form part of the feedback I will communicate to your lecturers, your specific identity will not be revealed.

If you would like to discuss any aspect of this study further please feel free to contact me or one of my supervisors (as listed below).

Ethics approval
This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Thank you for taking the time to read this information sheet and consider my request.

CONTACTS:

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References

ACER (2001). Employability skills for Australian industry: Literature Review and Framework Development, Report to: Business Council of Australia Australian Chamber of Commerce and Industry. Australian Council for Educational Research. Canberra, DEST. Retrieved 2 July 2009 from: http://www.dest.gov.au/NR/rdonlyres/FDD9BFD1-F678-4EA6-AAD6-71F135E002CC/2213/literature_research.pdf.

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Faculty of **Business**
School of Accounting and Corporate Governance

Group Work Survey

Bernadette Smith
PhD Candidate
School of Accounting & Corporate Governance
University of Tasmania

Supervisors: Dr Natalie Brown
Professor Yoni Ryan

May 2012

Love/hate group work? Have your say!

You are invited to complete an in-class survey about your perceptions and experiences of group work.

This survey is part of PhD research that looks at the effectiveness of group work in accounting education.

So whether you love it or hate it (or fall somewhere in between) this is a great opportunity to have your say.

The survey should take around 15 minutes to complete. Completion of the survey constitutes consent to participate in the study. However, participation is voluntary which means that if you start the survey or change your mind at any time afterwards you are free to withdraw from the study and withdraw permission to use any information you have provided. There is more detailed information about the study on the front page of the survey.

2

Group work survey

It is really important to get as many responses as possible and most importantly your honest opinion is vital to the success of the study.

To complete the survey simply follow the instructions on the form that you have been given and TICK or fill in the response that best fits your immediate reaction.

At the end of the main survey you will be directed to a separate sheet of paper to indicate your willingness to participate further in a face to face interview early in semester 2.

3

Group work survey

If you have any questions regarding this study, please contact me (Bernadette.Smith@utas.edu.au) or one of my supervisors,
Dr Natalie Brown (Natalie.Brown@utas.edu.au) or
Professor Yoni Ryan (Yoni.Ryan@acu.edu.au).

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

Thank you very much your support.

All the best with your studies for the remainder of semester.

Bernadette
(PhD Candidate)

4

Appendix 8 Email 7: Student interview selection

To: Students (Selected for Case Study Interviews)
From: Bernadette Smith
Subject: Groupwork Study
Attach: Information sheet; Consent form

Dear <Student> ,

Thank you for agreeing to be interviewed about your perceptions and experiences of group work in accounting.

I am pleased to advise that you have been selected to participate in the interview stage of this study. The purpose of the interview is to gather more in-depth information about your experiences of learning in the group environment and your development of group work skills generally. Your participation is greatly appreciated and will provide valuable insights to help us more fully understand group work processes and what learning in groups means to you.

I plan to visit <your university> from <date> to <date> to conduct the interviews myself and therefore would like to schedule an appointment at a time that is most suitable for you. The interview will last approximately 45 minutes.

The dates and times available are:

Once I receive your preference I will be able to arrange the venue and then confirm the place, date and time.

I have attached an information sheet for you to read as well as a consent form that you will need to sign and bring along to the interview with you. I will have spare consent forms if needed but it is important that you read and understand the information sheet beforehand.

I look forward to meeting with you. If you have any other questions regarding the interview procedures or study in general please do not hesitate to contact me.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Best regards,
Bernadette

Bernadette Smith
PhD Candidate
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Appendix 8.1 Email attachment – Student information sheet & consent form

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Phone (03) 6226 2282 Fax (03) 6226 7845
Email: Bernadette.Smith@utas.edu.au

SCHOOL OF ACCOUNTING & CORPORATE GOVERNANCE

PARTICIPANT INFORMATION SHEET
Student Group Work Interviews
Facilitating collaborative learning in accounting students

Thank you for your participation in this study.

The following information outlines my overall PhD research study and how this stage of the process, which involves surveying students' perceptions and experiences of group work is a vitally important component. I believe that your input will provide invaluable data to give perspective and frame the direction for a more in-depth analysis of students' understanding of learning within group work environments.

The main purpose of this exercise is to gather information from students within the same class/learning environment to ensure we capture as many different perspectives as we can and account for the great diversity of views, perceptions and experiences. You have been invited to participate in this interview as one of the students from <subject code and name> (semester #). To account for differences in other places I will also be repeating student interviews at two other Australian universities.

Following this I will invite a number of students to participate further in a more in-depth analysis through personal interviews.

Background
Group work has taken on greater significance in higher education in recent times. There appear to be 3 main drivers:

1. Employer demand: the increasing emphasis on generic skills such as interpersonal, communication and critical thinking skills;
2. The changing face of higher education: greater diversity and numbers of students;
3. The extant literature: it is well documented that collaborative learning enhances critical thinking and interpersonal skills.

However, there appear to be different conceptualisations of what it all means in the context of teaching and learning and how such skill development can be integrated into the curriculum (Barrie, 2007). This is especially so for accounting education where there has traditionally been a greater emphasis on technical skills. The very mention of having to work with others at university often brings moans of discontent from students and continues to present challenges for students and staff in a number of areas. Furthermore, the cognitive processes associated with learning in groups and the development of group work skills, particularly in accounting education, is not well understood.

Purpose of the study
The overall purpose of the study is to examine the meaning of 'group work' for accounting students and their teachers. It will aim to address the lack of empirical evidence regarding the acquisition and transferability of knowledge within a group environment and the processes involved in the development of group work skills. Communication, critical thinking and interpersonal skills – 'working with others'─ tend to dominate generic skills inventories and frameworks across sectors and around the world (ACER, 2001; Barrie et al., 2009). Importantly, the growing emphasis on ethical, social and global perspectives, on international students having the opportunity to practice English language communication skills, on life-long learning, and adapting to changing environments, is also grounded firmly in the ability to communicate, respect, respond, and interact with others. Clearly, these represent core learning outcomes for the 21st century graduate entering a global market.

Confidentiality
All information will be treated in a confidential manner, and your name and/or those of your courses will not be used in any publication arising out of the research.

Your responses to the interview questions will be recorded on audiotape to be later transcribed to written text. Interview transcripts will include only pseudonyms in place of participant and third party names, or any other identifying information. If you wish you will have the opportunity to view the transcribed interviews to elaborate or make corrections.

Data obtained from this research will be securely stored at the University and destroyed five years after publication of the thesis.

Risks and Benefits
Your involvement in this study is completely voluntary and you are free to withdraw from the interview at any time, without consequence, and to withdraw permission to use any information provided by you, provided that you do so before the thesis is completed.

While the information you provide will form part of the feedback I will communicate to your lecturers, your specific identity will not be revealed.

If you would like to discuss any aspect of this study further please feel free to contact me or one of my supervisors (as listed below).

Ethics approval
This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Thank you for taking the time to read this information sheet and consider my request.

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References

ACER (2001). Employability skills for Australian industry: Literature Review and Framework Development, Report to: Business Council of Australia Australian Chamber of Commerce and Industry. Australian Council for Educational Research. Canberra, DEST. Retrieved 2 July 2009 from: http://www.dest.gov.au/NR/rdonlyres/FDD9BFD1-F678-4EA6-AAD6-71F135E002CC/2213/literature_research.pdf.

Barrie, S. C. (2007). "A conceptual framework for the teaching and learning of generic graduate attributes." Studies in Higher Education 32(4): 439 - 458.

Barrie, S. C. (2009). Achieving graduate attributes. Presented at the Scottish QAA Enhancement Themes Conference "Graduates for the 21st Century" Heriot-Watt University, Edinburgh, 5-6th March 2009 Retrieved 17 August 2009 from http://www.enhancementthemes.ac.uk/Conference/Documents/SimonBarrie2009.pps.

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SCHOOL OF ACCOUNTING & CORPORATE GOVERNANCE

CONSENT TO PARTICIPATE IN RESEARCH

Student Interviews

Facilitating collaborative learning in accounting students

1. I have read and understood the 'Information Sheet' for this study.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves:
    a. Scheduling a mutually convenient time to conduct the interview;
    b. Completing a face to face interview that will take approximately forty five minutes;
    c. The opportunity to elaborate or correct transcribed interviews;

4. I understand that my participation in this study is voluntary. I understand that I am free to refuse to answer any particular question and can withdraw from the study at any time without prejudice. The freedom to withdraw from the study also includes the right to withdraw any data contributed by me subject to the time restriction imposed by the completion of the thesis.

5. I understand that all research data will be securely stored on the University of Tasmania premises for five years following the publication of the PhD and then destroyed.

6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.

8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researchers will be used only for the purposes of the research.

9. I agree to participate in this face to face interview and to have the interview recorded on audiotape. I further understand that I may withdraw at any time without any effect, and if I so wish may request that any data I have supplied be withdrawn from the research.

Name of participant:_____

Signature of participant: _____**Date:** _____

Statement by Investigator

☐ I have explained the project and the implications of participation in it to this participant and I believe that the consent is informed and that he/she understands the implications of participation.
OR
☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this study.

Name of investigator: Bernadette Smith

Signature of investigator: _____**Date:** _____

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [H11127].

Appendix 9 Interview schedule 1 – Academics

PREAMBLE:

Hello <name>

It's Bernadette Smith from the University of Tasmania. I'm calling about the telephone interview to survey your perceptions, experiences and use of group work as part of my PhD research. You indicated earlier that this would be a good time to call. Is it convenient for you to speak with me now? The questions I need to ask will take about 30 minutes.

Response NO: Arrange another time

Response YES: I have received your consent form. Thank you very much for that.

Just to confirm - you have read the information sheet that was with the consent form and you understand what the study involves?

I really appreciate you agreeing to participate in this interview. If at any time throughout the interview you wish to stop or not continue, you are free to do so. That's fine.

If you have any questions at all about the process or the study itself please feel free to ask. Even if you think of something later you have my contact details and those of my supervisors on the information sheet.

As you will have seen on previous correspondence and on the information sheet, this study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

BEGIN: See Question Sheet attached "Survey of Academics Perceptions & Experiences of Group Work".

CONCLUSION:
Thank you. That completes this telephone interview, except to ask if you are willing to participate further in the study.

Response NO: Thank them again for their valuable time and input.

Response YES: WHAT NOW?
Further participation will not be onerous. It will simply involve periodic discussions with me and the practicalities of surveying and interviewing your students in semester 2. In most cases your current students will have moved on in semester 2, so I may need your help to determine the best way to track their whereabouts and negotiate with other staff if needs be.

During this semester I am interviewing 12 academics, inviting each of you to consider participating further in this study, with the aim of selecting just 3 or 4 for the purpose of the case studies.

If you agree I will be in touch again towards the end of semester to advise if you and your students have been selected. The sample group of 3 or 4 courses needs to represent a cross section of cases on how group work is utilised in accounting courses in Australia. This interview together with the other interviews with academics will provide some guidance on that selection.

Thank you very much for your valuable time and input.

As I mentioned earlier your responses will now be transcribed and if you wish you may review the transcribed interview text to elaborate or correct any points.

If you have any further enquiries please feel free to contact me or one of my supervisors (Their names and all our contact details are listed on the information sheet).

Appendix 10 Interview schedule 2 - Students

INTERVIEW PREAMBLE:

Introduction:
Thank you for coming along today and agreeing to participate in this study.

Consent form & participant information sheet:
I have your signed consent form here (thank you). It states that you have read and understood the Information Sheet for this study.

I have another copy of the participant information sheet here so that we can briefly go over it all again and if you have any questions at all please feel free to ask.

I draw you attention to the ethics approval and concerns statement which states that:

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC *reference number H11127*].

Structure and Interview Procedure:
This interview is what we call a 'semi-structured' interview so while I have a list of questions here to ask, you should think of it as just a friendly, informal chat where your opinion and what you think is the most important thing.

I am simply trying to understand what 'learning in groups' means to you so there's no such thing as a wrong answer. In fact the type of study that I'm doing means that I am only interested in variations and differences in what it means to students so again don't worry about what you think others might say or what anyone might think. All information that I collect and everything you say is treated in the strictest confidence and the university has a special ethics committee to make sure that it all happens.

If you are happy with all of that – shall we begin?

INTERVIEW QUESTIONS:

Contextual Q1

1.1 First of all, can you tell me a little about yourself (as a university student)?
   a. What are you studying?
   b. How you made the choice to do accounting (or the combination of majors)?
   c. What has been your best experience at university so far?
   d. When do you hope to graduate?
   e. What are your plans for the future (after you graduate)?

Open Primary Q1

1.2 What are your initial thoughts when you hear the word 'group work'?

Situated Example 1

1.3 Can you give me an example of the different types of group work you've used at university generally (in all disciplines)?
(If further clarification required: What did you have to do when your lecturer/tutor asked you to work with others?)

Contextual Q2

2.1 In your experience, what do you think makes group work 'work'?
Probes:
   a. Why do you think that is?
   b. Can you tell me more?

c. What other reasons?
d. I'm not quite clear what you mean by that?

Open Primary Q2

2. What does it mean to you to have group work included in your accounting subjects?
    a. What does it mean for your learning of accounting?
    b. Why do you think that's important?

Situated Example 2

3. Can you give me an example of your experiences of group work specifically in your accounting subjects?
    a. Is accounting any different to other subjects? How?
    b. What did you do?
    c. Why did you do it that way?
    d. Did you achieve your goals?

Contextual Q3

2.2 What do you think you have learned from your accounting group work?
Probes:
    e. Why do you think that is?
    f. Can you tell me more?
    g. Anything else?

Open Primary Q3

4. How do you think you will be able to apply what you have learned in the future?
    a. What does it mean for your learning of accounting?
    b. Why do you think that's important?

Situated Example 3

5. Can you give me a specific example of how group work has helped with your learning and the development of skills and knowledge?
    a. Is that something you can use in other subjects or in the future?
    b. Is accounting any different to other subjects? How?
    c. How do you think you might have helped others learn?

Conclusion:
That concludes the questions I had for you.
Are there any final comments you'd like to make or anything you'd like to add?

Thank you so much for your valuable input. I really appreciate your time and your generous support of my study. Reminder about viewing transcript or withdrawing etc.

Appendix 11 Survey instruments

Appendix 11.1 Telephone survey/interview of academics

1. PREAMBLE & INSTRUCTIONS

Thank you for taking the time to participate in this interview. It provides an opportunity for you to share your perceptions and experiences of group work within accounting education. Your responses will also help give direction and frame my approach to a more in-depth analysis of students' understanding of their learning within group work environments. Ultimately our aim is to enhance learning outcomes for all accounting students.

I will be surveying academics at 6 different Australian universities and using this data to help select 3 or 4 accounting units to participate further in in-depth case studies. The case studies will involve online student surveys as well as in-depth interviews with a selection of students.

At the end of this telephone survey I will ask if you would like to participate further and I will explain what will happen next.

If it is OK with you I would like to record this interview so that the full context of our conversation can be later transcribed to written text. Please be assured that all information will be treated in a confidential manner and interview transcipts will include only pseudonyms in place of the names of people, places and/or other identifying information such as course codes etc.

If you would like to discuss any aspect of this study further or think of anything you wish to add later please feel free to contact me, or one of my supervisors:
Dr Natalie Brown (Natalie.Brown@utas.edu.au)or
Professor Yoni Ryan (Yoni.Ryan@acu.edu.au.

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

2. TELEPHONE SURVEY OF ACADEMICS' PERCEPTIONS and EXPERIENCES OF GROUP WORK

There are 3 parts to this survey:

Part A: General questions about Group Work
Part B: Questions about a specific instance where you have used Group Work
Part C: Questions about you and your job

Definition of Group Work:

Students often gather with their peers and voluntarily organise themselves into study groups. However for the purpose of this study 'Group work' is defined as any directed interaction or sharing of information, responsibilities and/or tasks between students within the context of a unit/subject.

TEAMWORK:
Although teamwork and groupwork are often used interchangably, for the purpose of this study, teamwork is taken to mean the PROCESS of working together in a coordinated effort.

Teamwork encompasses the skills and processes,
while the group and directed groupwork tasks provide the tool/vehicle.

To use a computer analogy, group work is the hardware, the casing, and teamwork is the software or processing component.

3. PART A: General questions about Group Work

1. What are you initial thoughts when you hear the word 'groupwork'?

INITIAL REACTION =

ADDITIONAL PROBING QUESTIONS IF NEEDED - Can you briefly explain the reasons for your answer to question 1?

Can you give me an example?

2. In your experience, what makes groupwork work?

3. Based on your experience, how much 'learning' do you think students achieve in groups?

PROBES:
Why do you think that is?
Can you think of an example?

4. Do you believe teamwork skills should be included in the accounting curriculum?

◯ Yes ◯ No ◯ Unsure

5. Briefly explain the reasons for your answer to question 3.

6. Please indicate how strongly you agree or disagree with the following statements:

In general have you found group work:

	Very strongly disagree	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Very strongly agree
A. Increases workload for staff	◯	◯	◯	◯	◯	◯	◯
B. Helps students to master course material	◯	◯	◯	◯	◯	◯	◯
C. Provides students with a real-world experience	◯	◯	◯	◯	◯	◯	◯
D. Helps students engage in their learning	◯	◯	◯	◯	◯	◯	◯
E. Stimulates students to work beyond minimum requirements	◯	◯	◯	◯	◯	◯	◯
F. Is an important aspect of university learning	◯	◯	◯	◯	◯	◯	◯
G. Is an effective way of dealing with assessing large classes	◯	◯	◯	◯	◯	◯	◯
H. Is generally perceived negatively by students	◯	◯	◯	◯	◯	◯	◯
I. Forms a planned and integral part of the whole course in which teamwork skills are developed incrementally	◯	◯	◯	◯	◯	◯	◯
J. Hinders students' ability to think and act independently	◯	◯	◯	◯	◯	◯	◯

7. To what extent do you use group work in your teaching?

◯ Never

◯ Rarely

◯ Occasionally

◯ Often

◯ Always

8. In the subjects that you teach, do you generally:

	Never	Rarely	Occasionally	Often	Always
A. Assess group work	◯	◯	◯	◯	◯
B. Incorporate an assessment task for individual students within a group project	◯	◯	◯	◯	◯
C. Allow students to select their own work groups	◯	◯	◯	◯	◯
D. Randomly allocate students to groups	◯	◯	◯	◯	◯
E. Allocate students to groups based on certain characteristics eg gender; age; ethnicity;	◯	◯	◯	◯	◯
F. Have a diverse mix of students within a group (eg.abilities; gender; age; ethnicity)	◯	◯	◯	◯	◯
G. Have the same student teams working together on various tasks throughout semester	◯	◯	◯	◯	◯
H. Precede group work tasks with specific teamwork preparation activities	◯	◯	◯	◯	◯
I. Have a contract type agreement between group members	◯	◯	◯	◯	◯
J. Teach teamwork skills	◯	◯	◯	◯	◯

9. Please indicate how strongly you agree or disagree with the following statements:

What has been your general experience with Group Work processes?

	Very strongly disagree	Strongly disagree	Disagree	Undecided	Agree	Strongly agree	Very strongly agree
A. Groups simply divide the work between individuals rather than working collaboratively	◯	◯	◯	◯	◯	◯	◯
B. Group work promotes collegiality within the class	◯	◯	◯	◯	◯	◯	◯
C. Some group members participate more than others	◯	◯	◯	◯	◯	◯	◯
D. Dominant individuals tend to take control of discussions in ways that limit the contributions of other group members?	◯	◯	◯	◯	◯	◯	◯
E. Group members report difficulties keeping track of all ideas and information contributed	◯	◯	◯	◯	◯	◯	◯
F. More ideas are generated when working in a group	◯	◯	◯	◯	◯	◯	◯
G. It is difficult for students to find a mutually convenient time to meet	◯	◯	◯	◯	◯	◯	◯
H. Group work encourages students to take responsibility for their own learning	◯	◯	◯	◯	◯	◯	◯
I. It's difficult to reliably monitor and evaluate group processes	◯	◯	◯	◯	◯	◯	◯
J. Individuals tend to rely on the lecturer/tutor to confirm the groups' treatment of a problem	◯	◯	◯	◯	◯	◯	◯
K. Students tend to spend more time on group tasks than they would if working alone	◯	◯	◯	◯	◯	◯	◯
L. In most cases teamwork learning objectives are met	◯	◯	◯	◯	◯	◯	◯
M. It's more equitable to assess individuals than groups	◯	◯	◯	◯	◯	◯	◯

10. Please rate the following motivations for using group work activites in teaching accounting students at university.
(Your opinion is important whether or not you actually use group work)

	Not important at all	Of little importance	Moderately important	Important	Very important
A. To manage workloads (for example with large classes)	◯	◯	◯	◯	◯
B. To model workplace experiences	◯	◯	◯	◯	◯
C. To specifically develop generic team skills	◯	◯	◯	◯	◯
D. To help develop other generic graduate attributes (eg critical thinking, problem solving, ethical decision making)	◯	◯	◯	◯	◯
E. To develop discipline knowledge and skills	◯	◯	◯	◯	◯

4. PART B: Questions about a specific instance where you have used Group Work

11. Have you or do you plan to use any type of group work in the subject/s you are teaching THIS SEMESTER (either formally or informally)?

- ◯ Yes
- ◯ No
- ◯ [NOTE TO INTERVIEWER] IF NO - Verify unit outline information; if still NO go to Part 3 - Demographics.

12. What is the name and year level of the subjects you are teaching this semester?

5. One specific experience of Group Work

Thinking about ONE instance where you are using Group work in your teaching THIS SEMESTER, please answer the following questions:

13. Is the group activity....

- ◯ Voluntary for students?
- ◯ Mandatory?

14. How many students IN TOTAL are currently enrolled in this subject? ..... (NOTE TO INTERVIEWER - Can be exact or approx. see below)

- ◯ Fewer than 10
- ◯ 11 – 30
- ◯ 31 -50
- ◯ 51-100
- ◯ 101 – 200
- ◯ 201-500
- ◯ 501- 1000
- ◯ More than 1000

15. Please indicate which ONE of the following best describes the teaching mode used in this subject?

- ◯ Face to face lectures and tutorials supported by an online interface (such as webct; blackboard)
- ◯ Only face to face classes with no support materials supplied online
- ◯ Face to face workshops supported by an online interface (such as webct; blackboard)(eg. Problem based format)
- ◯ On-line only
- ◯ Mixed mode/hybrid (eg. mix of face to face; online web conference; assessed/mandatory online activities)

Other (please specify)

16. Please select the context in which you will or have used group work this semester?

You may select more than one.

- ☐ Lecture
- ☐ Workshop
- ☐ On-line/virtual activity
- ☐ Tutorial
- ☐ Practical/on the job
- ☐ Assessment only
- ☐ Seminar
- ☐ On-line discussion group

Other (please specify)

17. On average how many student members are in each work group?

18. Please identify the most appropriate category to describe the type of group activity you are currently using?

- ◯ Formal groups (long term) (eg major group project; various tasks but same group throughout semester)
- ◯ Formal groups (short term) (eg. one off in class activity such as presentations; role play; debating; groups swap members for different tasks).
- ◯ Informal groups (eg. unassigned groups; inconsistent membership; random discussion groups)

19. What percentage of the students' overall grade for the unit relates to formally assessed group work tasks?

Please use a decimal number to represent the percentage i.e. 15% - enter 0.15

20. In relation to the specific instance where you are using group work this semester, have you explicitly taught group work/ teamwork skills?

- ◯ Yes
- ◯ No

21. To what extent do you explicitly monitor team progress? (NOT including conflicts brought to your attention)

- ◯ Never
- ◯ Rarely
- ◯ Occasionally
- ◯ Often
- ◯ Always

22. Do other staff teaching into this subject use group work in the same way as you?

- ◯ No.
- ◯ Yes, it was an assessable task.
- ◯ Yes, we tend to approach informal discussions and group work in the same way.
- ◯ I'm not sure.

23. How many staff in total (including you) are involved in teaching this unit last semester?

24. Are you the lecturer in charge/unit coordinator?

- ◯ Yes
- ◯ No

25. Are you normally the lecturer in charge of this subject?

- ◯ Yes
- ◯ No

26. As the lecturer-in-charge, to what extent did you provide training or other specific team based resources for other teaching staff in your subject?

- ◯ Never
- ◯ Rarely
- ◯ Occasionally
- ◯ Often
- ◯ Always
- ◯ Not applicable

27. Many factors influence our choice to use group work activities in teaching our accounting students.

For each factor please indicate the level of influence that you believe it has on your choice to use or not to use group work (Your opinion is important whether or not you actually use group work)

	None/very little	Low level of influence	Moderate level of influence	Significant influence	Very high level of influence
A. Professional body/accrediation requirements	◯	◯	◯	◯	◯
B. Industry/employer expectation or views	◯	◯	◯	◯	◯
C. Community expectations or views	◯	◯	◯	◯	◯
D. Your university's expectations	◯	◯	◯	◯	◯
E. Your Department's/School/Faculty's expectations	◯	◯	◯	◯	◯
F. Your peer/colleagues expectations or views	◯	◯	◯	◯	◯
G. Your personal expectations or views	◯	◯	◯	◯	◯
H. Students' expectaions or views (eg students' course feedback)	◯	◯	◯	◯	◯
I. Your level of confidence to teach teamwork skills	◯	◯	◯	◯	◯
J. Your level of confidence to assess groupwork	◯	◯	◯	◯	◯
K. Your level of willingness to teach teamwork skills	◯	◯	◯	◯	◯
L. Your level of willingness to assess groupwork	◯	◯	◯	◯	◯
M. Your workload	◯	◯	◯	◯	◯
N. Previous teaching experiences with group work	◯	◯	◯	◯	◯

28. Briefly describe any other factors that you believe have a significant or high level of influence on your choice to use or not to use group work activities.

29. Having completed this questionnaire are you now more likely to think about group work differently?

◯ Yes

◯ No

6. Part C: YOU AND YOUR JOB

As your employment situation often impacts on what teaching activities you are able to use, it would be helpful to know a little about you, your university and your job.

Please 'click' the dot point next to your answer for each of the following 2 questions about your university.

Click "next page" for questions about you and your job.

30. Just to confirm, you are employed by <name their university>? [NOTE TO INTERVIEWER -Telephoned - so just confirm this is where they teach]

Do you teach at any other university on a contractual basis?

[If yes, ask what subject and the details of that arrangement]

31. For the majority of the time do you teach at a metropolitan or regional campus of <name university you have phoned>?

◯ Metropolitan = Campus in a major city [i.e in Melb. Syd. Bris. Adelaide, Perth]

◯ Regional = Universities in smaller cities, regional or rural areas [incl. Hobart, Darwin, Newcastle] and Regional campuses of larger universities [eg. Werribee campus of VU; Kalgoorlie campus of Curtin; ACU Ballarat]

7. ABOUT YOU & YOUR JOB

32. Generally what year group/s do you teach?

**[You can select more than one where your main teaching responsibilities are equally divided.
eg. sem 1- 2nd years; sem 2 – 3rd years]**

- ☐ 1st Years
- ☐ 2nd Years
- ☐ 3rd Years
- ☐ Hons
- ☐ MPA
- ☐ Other post-graduate course

33. Do any of your accounting colleagues use group work in their units (subjects)that they teach?

- ◯ Yes
- ◯ No
- ◯ Not sure

34. What position do you currently hold at your institution?

- ◯ Level A (Associate Lecturer)
- ◯ Level B (Lecturer)
- ◯ Level C (Senior Lecturer)
- ◯ Level D (Associate Professor)
- ◯ Level E (Professor)
- ◯ Casual/Sessional Staff
- ◯ Other (eg Research Fellow)

35. On what basis are you employed?

	Full time	Part-time
Sessional/casual	◯	◯
Contract	◯	◯
Permanent (On probation i.e. on tenure track)	◯	◯
Permanent-Tenured	◯	◯

36. How many years of workplace/industry experience (excluding teaching) do you have that is related (directly or indirectly) to accounting?

- ◯ Less than 1 year
- ◯ 1 - 5 years
- ◯ 6 - 10 years
- ◯ More than 10 years

37. In total how many years of teaching experience do you have? (All Sectors)

- ◯ Less than 1 year
- ◯ 1 - 5 years
- ◯ 6 - 10 years
- ◯ More than 10 years

38. How many years have you been teaching at university (including part time/casual appointments)?

Only numbers may be entered in this field.
Round up or down to the closest full year.

39. Do you have a formal teaching qualification? (i.e. includes any teaching qualification)

- ◯ Yes
- ◯ No

If you answered "Yes" please identify the qualification

40. What is your gender?

- ◯ Male
- ◯ Female

41. Please indicate the age group to which you belong.

- ◯ 29 years or younger
- ◯ 30 to 44 years
- ◯ 45 to 64 years
- ◯ 65 or more

42. Is there any other comment you wish to add regarding group work?

IMPORTANT NOTE: We have now completed the survey. Would you like to check or change any of your responses?

Thank you for your valuable time and cooperation in completing this survey. It is greatly appreciated.

Appendix 11.2 In-class student survey

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

SURVEY INSTRUCTIONS

Thank you for taking the time to fill in this survey about group work. It provides an opportunity for you to share your experiences of group work within your accounting degree and your responses will help improve our understanding of how students engage with group work. Ultimately our aim is to enhance learning outcomes for all accounting students.

The survey should take approximately 15 minutes to complete. At the end of the survey there will be an opportunity for you to indicate if you would like to participate further in follow up interviews. You will be directed to a separate page to provide your details and I will contact you soon after.

I will be surveying students at 4 different Australian universities and providing feedback to your lecturers. Please be assured that you will not be able to be identified with your responses and all data is confidential.

If you would like to discuss any aspect of this study please feel free to contact the researcher,
Bernadette.Smith@utas.edu.au (or phone 03 6226 2282)
or either supervisor:
Dr Natalie Brown (Natalie.Brown@utas.edu.au) or
Professor Yoni Ryan (Yoni.Ryan@acu.edu.au).

This study has been approved by the Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote [HREC reference number H11127].

SURVEY INSTRUCTIONS continued...

There are 3 parts to this survey:

Part A: General questions about Group Work
Part B: Questions about a specific instance where you have used Group Work
Part C: Questions about you and your circumstances

The survey is voluntary and anonymous and there are no specific risks associated with participation in the survey. The demographic questions in Part C will be used to analyse differences across various groups and WILL NOT be used to identify individuals. The results will be published only in aggregate form.

At the end of the survey there is space for you to expand on your answers or identify other issues that may not have been covered previously.

DEFINITION OF GROUP WORK:

Students often gather with their peers and voluntarily organise themselves into study groups. However for the purpose of this study 'Group work' is defined as any directed interaction or sharing of information, responsibilities and/or tasks between students within a formal learning environment.

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

PART A: General questions about Group Work

1. To what extent are you required to work in groups in your ACCOUNTING subjects? (include informal discussion groups that may have been part of any class activity as well as formally assessed projects)

- ◯ 1. Never
- ◯ 2. Rarely
- ◯ 3. Occasionally
- ◯ 4. Often
- ◯ 5. Always

2. To what extent are you required to work in groups in your OTHER subjects? (include informal discussion groups that may have been part of any class activity as well as formally assessed projects)

- ◯ 1. Never
- ◯ 2. Rarely
- ◯ 3. Occasionally
- ◯ 4. Often
- ◯ 5. Always

3. To what extent do you think group work should be used in your ACCOUNTING subjects?

- ◯ 1. Never - the lecturer should tell us what to do and give us examples
- ◯ 2. Rarely - accounting should focus more on technical skills
- ◯ 3. Occasionally - but not in every accounting subject
- ◯ 4. Often - some aspect of collaboration in each subject
- ◯ 5. Always - group discussion, interaction, collaboration and active participation should be part of every lecture, tutorial and assessment task (not always a group project though)

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

4. Please indicate how strongly you agree or disagree with the following statements:

	1.Very strongly disagree	2.Strongly disagree	3.Disagree	4.Undecided	5.Agree	6.Strongly agree	7.Very strongly agree
I like to interact with other students in my learning situation.	◯	◯	◯	◯	◯	◯	◯
I've had positive experiences thus far working in groups in my accounting subjects.	◯	◯	◯	◯	◯	◯	◯
As a student I would rather work on my own.	◯	◯	◯	◯	◯	◯	◯
Group work is generally perceived negatively by other students.	◯	◯	◯	◯	◯	◯	◯

Group Formation

5. Please indicate how strongly you agree or disagree with the following statements:

What has been your general experience with group formation and cohesion?

	1.Very strongly disagree	2.Strongly disagree	3.Disagree	4.Undecided	5.Agree	6.Strongly agree	7.Very strongly agree
Group work promotes collegiality within the class	◯	◯	◯	◯	◯	◯	◯
It is difficult for students to find a mutually convenient time to meet	◯	◯	◯	◯	◯	◯	◯
Students tend to spend more time on group tasks than they would if working alone	◯	◯	◯	◯	◯	◯	◯
I prefer to select my own group rather than being allocated to a group	◯	◯	◯	◯	◯	◯	◯
It's best to have a diverse mix of students within a group (eg abilities; age; ethnicity)	◯	◯	◯	◯	◯	◯	◯
Sometimes I feel reluctant (apprehensive) about expressing my ideas in a group	◯	◯	◯	◯	◯	◯	◯
I would rather work with the same group all semester completing various tasks	◯	◯	◯	◯	◯	◯	◯

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

Group Processes

6. To what extent have you received training in group processes or other specific team based resources?

- ◯ 1. Never
- ◯ 2. Rarely
- ◯ 3. Occasionally
- ◯ 4. Often
- ◯ 5. Always
- ◯ Not applicable

7. To what extent did your lecturer explicitly monitor team progress?

- ◯ 1. Never
- ◯ 2. Rarely
- ◯ 3. Occasionally
- ◯ 4. Often
- ◯ 5. Always

8. In your opinion how important is group work at uni to your future career/job opportunities?

- ◯ 1. Not important at all
- ◯ 2. Of little importance
- ◯ 3. Moderately important
- ◯ 4. Important
- ◯ 5. Very important

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

9. Please indicate how strongly you agree or disagree with the following statements:

What has been your general experience with Group Processes?

	1.Very strongly disagree	2.Strongly disagree	3.Disagree	4.Undecided	5.Agree	6.Strongly agree	7.Very strongly agree
In general my group experiences have improved my ability to get along with others and understand things from their point of view	◯	◯	◯	◯	◯	◯	◯
I do not believe that my group experiences have contributed to the development of teamwork skills	◯	◯	◯	◯	◯	◯	◯
Generally group members are very supportive and encouraging of each other	◯	◯	◯	◯	◯	◯	◯
Group experiences help to develop communication skills	◯	◯	◯	◯	◯	◯	◯
Group experiences help to develop critical thinking skills	◯	◯	◯	◯	◯	◯	◯
Working in groups is a satisfying experience	◯	◯	◯	◯	◯	◯	◯
It's difficult keeping track of all ideas and information contributed	◯	◯	◯	◯	◯	◯	◯
It's difficult to reliably monitor and evaluate group processes	◯	◯	◯	◯	◯	◯	◯
Individuals tend to rely on the lecturer/tutor to confirm the groups' treatment of a problem	◯	◯	◯	◯	◯	◯	◯
Over the course of group work projects we don't normally have a problem with conflict	◯	◯	◯	◯	◯	◯	◯
Communication is the key to making group work succeed	◯	◯	◯	◯	◯	◯	◯
Group work helps to build new friendships	◯	◯	◯	◯	◯	◯	◯

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

Individual Accountability

10. Please indicate how strongly you agree or disagree with the following statements:

What are your general expectations of individual contributions?

	1.Very strongly disagree	2.Strongly disagree	3.Disagree	4.Undecided	5.Agree	6.Strongly agree	7.Very strongly agree
Some group members participate more than others	◯	◯	◯	◯	◯	◯	◯
Dominant individuals tend to take control	◯	◯	◯	◯	◯	◯	◯
Group work encourages students to take responsibility for their own learning	◯	◯	◯	◯	◯	◯	◯
Group work stimulated me to work beyond minimum requirements.	◯	◯	◯	◯	◯	◯	◯
It's more equitable to assess individuals than groups	◯	◯	◯	◯	◯	◯	◯
It's difficult to achieve equal contribution from group members if their technical skills are inadequate.	◯	◯	◯	◯	◯	◯	◯

Interdependence

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

11. What has been your general experience with team performance?

	1.Very strongly disagree	2.Strongly disagree	3.Disagree	4.Undecided	5.Agree	6.Strongly agree	7.Very strongly agree
I learned more about complex accounting issues by working in groups than I would have learned on my own.	◯	◯	◯	◯	◯	◯	◯
It's easier to understand difficult accounting concepts by working through problems yourself.	◯	◯	◯	◯	◯	◯	◯
In my view, the group experience makes a subject more enjoyable	◯	◯	◯	◯	◯	◯	◯
Working with others helps me to master course material	◯	◯	◯	◯	◯	◯	◯
Group work hinders students' ability to think and act independently	◯	◯	◯	◯	◯	◯	◯
Groups simply divide the work between individuals rather than working collaboratively	◯	◯	◯	◯	◯	◯	◯
More ideas are generated when working in a group	◯	◯	◯	◯	◯	◯	◯
I can see how group work is an important part of learning at university.	◯	◯	◯	◯	◯	◯	◯
I felt I did not learn anything new during group sessions.	◯	◯	◯	◯	◯	◯	◯
With group work we always help each other.	◯	◯	◯	◯	◯	◯	◯
I don't like relying on other people for my marks.	◯	◯	◯	◯	◯	◯	◯
I generally feel confident in the ability of my teams.	◯	◯	◯	◯	◯	◯	◯
I was very much aware that my group needed me and I needed them to successfully complete the task.	◯	◯	◯	◯	◯	◯	◯
My group works effectively together.	◯	◯	◯	◯	◯	◯	◯
We provide meaningful feedback to each other on the success or otherwise of the group effort.	◯	◯	◯	◯	◯	◯	◯
Any group assessment that I have done has been better prepared than if I had done it myself.	◯	◯	◯	◯	◯	◯	◯

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

Part B: About You and Your Personal Preferences for Study

This section of the questionnaire has a number of questions about you and about your attitudes towards your studies and your usual way of studying for your accounting subjects in particular.

There is no right way of studying. It depends on what suits your own style and the course you are studying. It is accordingly important that you answer each question as honestly as you can.

If you think your answer to a question would depend on the subject being studied, give the answer that would apply to the accounting subject(s) most important to you.

12. In relation to your accounting studies, please choose the one most appropriate response to each of the following questions.

Choose the response that best fits your immediate reaction. Do not spend a long time on each item: your first reaction is probably the best one. Please answer each item.

Do not worry about projecting a good image. Your answers are CONFIDENTIAL.

	1.Never	2.Rarely	3.Sometimes	4.True about half the time	5.Frequently	6.Almost always	7.Always
a. I find that at times studying gives me a feeling of deep personal satisfaction.	◯	◯	◯	◯	◯	◯	◯
b. I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.	◯	◯	◯	◯	◯	◯	◯
c. My aim is to pass the course while doing as little work as possible.	◯	◯	◯	◯	◯	◯	◯
d. I only study seriously what's given out in class or in the course outlines.	◯	◯	◯	◯	◯	◯	◯
e. I feel that virtually any topic can be highly interesting once I get into it.	◯	◯	◯	◯	◯	◯	◯

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

13. In relation to your accounting studies, please choose the one most appropriate response to each question.

	1.Never	2.Rarely	3.Sometimes	4.True about half the time	5.Frequently	6.Almost always	7.Always
f. I believe that lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.	◯	◯	◯	◯	◯	◯	◯
g. I go to most classes with questions in mind that I want answering.	◯	◯	◯	◯	◯	◯	◯
h. I make a point of looking at most of the suggested readings that go with the lectures.	◯	◯	◯	◯	◯	◯	◯
i. I see no point in learning material which is not likely to be in the exam.	◯	◯	◯	◯	◯	◯	◯
j. I find the best way to pass exams is to try to remember answers to likely questions.	◯	◯	◯	◯	◯	◯	◯

14. In relation to your accounting studies, please choose the one most appropriate response to each question.

	1.Never	2.Rarely	3.Sometimes	4.True about half the time	5.Frequently	6.Almost always	7.Always
k. I find I can get by in most assessments by memorising key facts.	◯	◯	◯	◯	◯	◯	◯
l. I generally restrict my study to what is specifically set by the lecturer as I think it is unnecessary to do anything extra.	◯	◯	◯	◯	◯	◯	◯
m. I work hard at my studies because I find the material interesting.	◯	◯	◯	◯	◯	◯	◯
n. I spend a lot of my free time finding out more about interesting topics which have been discussed in classes.	◯	◯	◯	◯	◯	◯	◯
o. I don't need to study topics in depth. I just need to know the basics.	◯	◯	◯	◯	◯	◯	◯

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

15. In relation to your accounting studies, please choose the one most appropriate response to each of the following questions.

	1.Never	2.Rarely	3.Sometimes	4.True about half the time	5.Frequently	6.Almost always	7.Always
p. I find most new topics interesting and often spend extra time trying to obtain more information about them.	◯	◯	◯	◯	◯	◯	◯
q. I do not find my accounting course very interesting so I keep my work to the minimum.	◯	◯	◯	◯	◯	◯	◯
r. I learn some things by going over and over them until I know them by heart even if I do not understand them.	◯	◯	◯	◯	◯	◯	◯
s. I find that studying academic topics can at times be as exciting as a good novel or movie.	◯	◯	◯	◯	◯	◯	◯
t. I test myself on important topics until I understand them completely.	◯	◯	◯	◯	◯	◯	◯

PART C: Demographic questions

These demographic questions will help us to make better use of the information collected in this survey.

Please be assured that these questions will NOT be used to identify individuals. Results of this survey will only be reported in an aggregated form.

16. For the majority of the time do you study at a metropolitan or regional campus of your university?

◯ Metropolitan = Campus in a major city [i.e in Melb. Syd. Bris. Adelaide, Perth]

◯ Regional = Universities in smaller cities, regional or rural areas [incl. Hobart, Darwin, Newcastle] and Regional campuses of larger universities [eg. Werribee campus of VU; Kalgoorlie campus of Curtin; ACU Ballarat]

17. What is your gender?

◯ Male

◯ Female

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

18. Please indicate the age group to which you belong.

- ◯ 17 years or younger
- ◯ 18 to 21 years
- ◯ 22 to 25 years
- ◯ 26 to 29 years
- ◯ 30 to 44 years
- ◯ 45 to 64 years
- ◯ 65 or more

19. About your degree

What is the name of the degree you will have when you graduate (eg BCom, BBus)?

In what majors are you enrolled? (eg Accounting, Finance, Marketing)

20. Did you come to university straight from secondary school (Yr 12)?

- ◯ Yes
- ◯ No

If no, please specify your most recent activities before university.

21. What is the main language spoken in your home?

- ◯ English
- ◯ Other (please specify)

22. Did you complete your secondary schooling in Australia?

- ◯ Yes
- ◯ No

If no (please specify the country of your schooling)

23. Are you a permanent resident or citizen of Australia?

- ◯ Yes
- ◯ No

If no, what is your country of residence?

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

24. Are you of Aboriginal or Torres Strait Islander origin?

- ◯ No
- ◯ Yes, Aboriginal
- ◯ Yes, Torres Strait Islander
- ◯ Yes, Aboriginal and Torres Strait Islander

25. Would you describe yourself as having a disability?

- ◯ Yes
- ◯ No

26. Thinking of all units (subjects) required for your degree course...

	Number of units (subjects) enrolled in this semester	Number of units (subjects) already completed
How far are you through your course?		

27. During semester how much time do you usually spend on each of the following?

	On Campus	In Class	Independent study (at home & uni)	Paid Work	Other non-university commitments (eg sport)
Please indicate the average number of hours spent on each activity PER WEEK?					

Please share with us the nature of your other commitments (eg sport, family)

28. How many years have you been studying at university (including previous degrees if applicable)?

Only numbers may be entered in this field. Round up or down to the closest full year.

STUDENT IN-CLASS SURVEY ABOUT GROUP WORK

29. Please indicate which of following you have previously obtained (Tick all that are applicable)

- [ ] Year 10 Secondary Education Certificate
- [ ] Year 12 Secondary Education Certificate
- [ ] TAFE (or similar technical) qualification
- [ ] Professional qualification (eg CA or CPA)
- [ ] Graduate Certificate
- [ ] University Diploma
- [ ] University Degree
- [ ] Honours
- [ ] Masters by course work only
- [ ] Masters by Research
- [ ] Doctorate or PhD
- [ ] None, I didn't complete formal schooling

Please specify the name of your highest previous educational qualification? (i.e Trade, other degree)

30. Having completed this questionnaire are you now more likely to think about group work differently?

- ◯ Yes
- ◯ No

Please feel free to provide any additional comments about your Group Work experiences

IMPORTANT NOTE: Before submitting, if you want to check or change any of your responses, please do so.

Thank you for your cooperation in completing this survey. It is greatly appreciated.

Please go to the separate sheet to indicate if you are willing to be interviewed as part of the next stage of this study..... Thank You.

Appendix 12 Students' further participation sheet

IN CLASS SURVEY - Further Participation

1. Further Participation

Thank you for taking the time to complete our survey.
You have been directed to this SEPARATE PAGE to indicate your willingness to participate further.

1. The next stage of this research project will be to conduct face-to-face interviews with 8 individual students from each accounting course surveyed.

Would you like to be interviewed?

◯ Yes.

◯ No, thank you. [If you answered No you may now hand in your completed responses]

2. If you answered 'Yes' please provide your contact details below.

I will email you as soon as these responses have been collated to advise if you have been selected to be interviewed and provide more information regarding that process.

Your name?	
Your University?	
Your email address?	
A contact phone number?	

The selection process will aim to collect more in-depth responses from students of diverse backgrounds, experiences and abilities.

As this page is not connected in any way to the survey you just completed, it would be helpful if you could answer the following 4 short demographic questions to help in that selection process (see over page).

This is optional.

2. Demographic information

1. Your gender?

◯ Male

◯ Female

Page 1

IN CLASS SURVEY - Further Participation

2. Please indicate the age group to which you belong.

- ◯ 17 years or younger
- ◯ 18 to 21 years
- ◯ 22 to 25 years
- ◯ 26 to 29 years
- ◯ 30 to 44 years
- ◯ 45 to 64 years
- ◯ 65 or more

3. What is the main language spoken in your home?

- ◯ English
- ◯ Other (please specify)

4. Are you a permanent resident or citizen of Australia?

- ◯ Yes
- ◯ No

If no, what is your country of residence?

Thank you for your cooperation in completing this form. It is greatly appreciated.

Appendix 13 Cultural & ethnic groupings & languages of accounting students

ABS Code	**Area**	**Language**	**Country**
1	Oceania	English	Australia, New Zealand
4	Middle East	Arabic	Saudi Arabia
5	South-East Asia	Burmese	Burma
		Chinese	Malaysia, Singapore
		English	Malaysia, Singapore
		Malay	Malaysia
		Indonesian	Indonesia
		Tagalog	Philippines
		Thai	Thailand
		Vietnamese	Vietnam
6	North-East Asia	Chinese	China, Hong Kong
		Cantonese	
		Hakka	
		Hokkien	
		Mandarin	
		Korean	Korea
7	Southern Asia	Bengali	Bengal
		Guyurati	India
		Hindi	India
		Urdu	Pakistan
8	Americas	English	USA
		Portuguese	Brazil
9	South & East Africa		
		Afrikaans	South Africa
		Kiswahili	East Africa
		Kakima	East Africa
		French	East Africa
		English	Zimbabwe, South Africa

Appendix 14 Descriptive statistics for the 5 factors extracted in EFA

Table A14.1: Descriptive statistics for factor 1 variables: Interdependence

FACTOR 1 variables: INTERDEPENDENCE	N	MEAN	1.VSD N	2.SD N	3.Disagree N	4.Undecided N (%)	5.Agree N	6.SA N	7.VSA N	Total Agreed
11g. More ideas in a group	223	5.1525	1	2	13	21 (9.4%)	113	55	18	83%
11h. Important part of learning at university	223	5.1166	3	2	8	37 (16.5%)	98	53	22	78%
11m. Group needed me and I needed them	222	4.7658	7	4	21	38 (17.0%)	99	38	15	68%
11n. My group works effectively together	224	4.5804	4	7	26	50 (22.3%)	103	23	11	61%
11j.We always help each other	224	4.4866	4	7	38	43 (19.2%)	97	29	6	59%
11c. Makes a subject more enjoyable	223	4.4350	7	7	37	53 (23.7%)	79	30	10	53%
11l. Generally confident in ability of team	223	4.3857	7	14	27	53 (23.7%)	87	30	5	55%
10c. Encourages responsibility for own learning	224	4.3661	9	13	45	24 (10.7%)	95	29	9	59%
11d. Helps me to master course material	224	4.3571	5	9	43	41 (18.3%)	100	22	4	56%
11a. Learned more about complex accounting	223	4.2646	8	9	49	47 (21.0%)	79	22	9	49%
11o.Provide meaningful feedback to each other	224	4.2277	7	17	43	48 (21.4%)	72	34	3	49%
11p. Assignment better than if done myself	224	3.9554	16	24	45	43 (19.2%)	67	23	6	43%

Table A14.2: Descriptive statistics for factor 2 variables: Skills

FACTOR 2 variables: SKILLS	N	MEAN	1.VSD N	2.SD N	3.Disagree N	4.Undecided N (%)	5.Agree N	6.SA N	7.VSA N	TOTAL agreed
9k.Communication is key to group work success	224	5.4911	3	2	8	12 (5.4%)	91	60	48	89%
9d.Helps to develop communication skills	224	5.1339	2	4	10	20 (8.9%)	119	48	21	84%
9e.Helps develop critical thinking skills	224	4.8036	2	6	26	38 (17.0%)	93	46	13	68%
9a.Improved my ability to get along with others & understand their point of view	224	4.7054	3	7	35	21 (9.4%)	107	44	7	71%
5a.Promotes collegiality within the class	223	4.6771	1	4	28	40 (17.9%)	115	30	5	67%
5e.Best with a diverse mix of students	223	4.2870	21	10	27	47 (21.0%)	78	24	16	53%

Table A14.3: Descriptive statistics for factor 3 variables: Personal

FACTOR 3 variables: PERSONAL	N	MEAN	1.VSD N	2.SD N	3.Disagree N	4.Undecided N (%)	5.Agree N	6.SA N	7.VSA N	TOTAL agreed
10a.Some members participate more than others	224	5.6696	3	2	4	7 (3.1%)	87	59	62	93%
10f. It's difficult to achieve equal contribution if technical skills are inadequate	224	5.4509	3	3	10	23 (10.3%)	72	61	52	83%
10b.Dominant individuals tend to take control	222	5.3694	1	1	6	24 (10.7%)	97	61	32	86%
11k.I don't like relying on other people for my marks	221	5.0950	5	6	21	35 (15.6%)	63	46	45	70%
5b.It's difficult to find a mutually convenient time	223	4.7803	2	10	33	27 (12.1%)	90	40	21	68%

Table A14.4: Descriptive statistics for factor 4 variables: Individualism

FACTOR 4 variables: INDIVIDUALISM	N	MEAN	1.VSD N	2.SD N	3.Disagree N	4.Undecided N (%)	5.Agree N	6.SA N	7.VSA N	TOTAL agreed
9b.My group experiences have not contributed to the development of teamwork skills	223	4.6502	3	9	26	36 (16.1%)	113	23	13	67%
11i. I did not learn anything new during group sessions	223	4.5516	6	10	31	40 (17.9%)	94	28	14	61%
11e. Hinders stud ability to think & act independently	224	3.9420	1	10	78	67 (29.9%)	53	10	5	30%
11b.It's easier to understand difficult accounting concepts by working through problems yourself	224	3.7634	8	19	81	47 (21.0%)	50	17	2	31%
11f.Groups simply divide the work between individuals rather than working collaboratively	224	3.2634	13	42	88	46 (20.5%)	27	5	3	16%

Table A14.5: Descriptive statistics for factor 5 variables: Process difficulties

FACTOR 5 variables: PROCESS DIFFICULTIES	N	MEAN	1.VSD N	2.SD N	3.Disagree N	4.Undecided N (%)	5.Agree N	6.SA N	7.VSA N	TOTAL agreed
9h.It’s difficult to reliably monitor and evaluate group processes	224	4.4777	1	5	47	49	84	31	7	54%
9g.It's difficult keeping track of all ideas and information contributed	224	4.2277	0	8	65	38	97	13	3	50%

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